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CONTRIBUTORS TO THE SEPTEMBER ISSUE

John B. Canning's *"The Economics of Accountancy" won for its author last year's "Beta Alpha Psi" award. Mr. Canning enjoys the distinction of being both accountant and economist. In his present article he questions the premises upon which so many of the beautiful theories of economists have been built, particularly those related to the concepts of cost.*

Henry W. Sweeney, *formerly on the staff of the New York office of Price, Waterhouse & Co., is engaged in the completion of a book of which his present article will form a chapter. Mr. Sweeney's thesis is that certain factors of appreciation (or of dollar depreciation) should be given current expression both on the balance sheet and statement of profit and loss. Another article in which the same topic was introduced appeared in last December's* Review.

A. C. Littleton *is the* Review's *most frequent contributor. His studies in the history of accounting theory were the basis of his recent doctor's thesis. His "Early Transaction Analysis" gives the background for the development of our terms "Debit" and "Credit."*

L. L. Briggs, *associate professor of economics in the University of Vermont, is interested in the relationship between law and accounting. He has been a previous contributor to the* Review *on the same subject.*

A. P. R. Drucker *is head of the Department of Business Administration and Banking at Colorado College. His present paper was presented at the December meeting of the Association. Mr. Drucker has been the author of several other papers on budgeting which have appeared in the* Review.

Edward J. Filbey *is professor of accounting at the University of Illinois and is in charge of the courses in Federal income taxes. His book of income tax problems was published a number of years ago.*

Chester F. Lay, *on leave of absence from the University of Texas, is visiting professor of accounting at the University of Chicago, where he has been preparing a thesis for his doctor's degree. The paper he has prepared for the* Review *is based on a statistical study made by him last year on the employment of accountants in the Chicago area. It is Mr. Lay's hope that further studies along the same line may be made elsewhere.*

The Accounting Review

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COST OF PRODUCTION AND MARKET PRICE

JOHN B. CANNING

MANY ECONOMISTS have expressed some supposed quantitative relation between cost of production and market (selling) price. John Stuart Mill, after stating that he contemplates only those cases "in which values and prices are determined by competition alone"[1] and in which "all parties (are supposed) to take care of their own interests,"[2] further limits his theory to those commodities that are freely reproducible. Of these he says "demand and supply always rush to an equilibrium, but the condition of *stable* equilibrium is when things exchange for each other according to their cost of production, or . . . at their Natural Value."[3] This term "Natural Value" or "necessary price, or value" he defines as "the cost of production, together with the ordinary profit."[4] This "ordinary profit," however, is qualified by saying, "Persons whose capital is already embarked, and cannot easily be extricated, will persevere for a considerable time without profit. . . . But they will not do so indefinitely. . . ."[5] Mill's doctrine, despite his wealth of qualification, is one of the simplest, or crudest. Many economists writing on Mill's value theory have found delight in its shortcomings.

Early in the development of theories about the relationship in question, economists abandoned the notion that any *de facto* or *actual* cost of the particular item to be sold influenced the selling price. "Cost of production" quickly came to mean "estimated cost of future production." This substitution of concepts raised two questions: whose future costs are meant; and what particular future costs are contemplated? Both of these questions have been immensely fertile in the sense that speculation about them has produced, not mere families, but hordes, of other questions. But both these questions and their descendants have been sterile in the sense that we have, as yet, no agreed answers to any of them nor answers that have successfully met the test of statistical verification.

We have witnessed the proliferation of marginal theories both with respect to marginal producers and with respect to cost of producing marginal units; marginal theories both with respect to potential producers and with respect to potential future units have been developed also. But objective criteria whereby we may know who are sub-marginal, who are marginal and who are supra-marginal producers are still wanting. Neither do we know whether or not any particular producer's volume stops short of the unit that would have been marginal, or just reaches that point or goes beyond it.

We are all familiar with the conceptual classification of commodities into those the increased production of which is attended either by increasing cost, constant cost, or decreasing cost. But we do not know which commodities belong to a particular class. It is said that the increase of agricultural products is attended by increasing costs, a statement that is, no doubt, true in some conditions, but not in all. It is said that manufacturing industries are subject to decreasing costs, again, conditionally true, in some sense. But what of clothing? Agriculture and manufacturing join in pro-

[1] *Principles of Political Economy* (5th Appleton ed.), Vol. 1, p. 541.
[2] *Ibid.*, p. 543.
[3] *Ibid.*, p. 561.
[4] *Ibid.*, pp. 555-6.
[5] *Ibid.*, p. 555.

ducing clothing. Is clothing in general, or any particular article of dress, produced subject to increasing, constant, or decreasing cost? Our inability securely to pigeonhole commodities on this basis has suggested to more than one that such theories, if scientific at all, belong to a science of "empty boxes." At best, such quasi-quantitative classifications are too crude for careful statistical work.

The classification of costs into constant and variable costs has likewise played a prominent rôle in price theory. Again we have "empty boxes" for no single item of cost has been shown to belong, except conditionally, to either class.[6] If any particular element of cost be written as a function of volume of production for one enterprise, the function will not hold true in others. If we write the function to express an average relation for all enterprises in an industry for a given period, the function will not be true of an earlier or of a later period. Measurements of unused capacity, in other words, are unstable quantities both with respect to different concerns, different times, and different products.

Economists have dealt, after a fashion, with the relation of costs of commodities produced jointly, to the prices of the joint products. Judging by the space given to their treatment one may suppose that joint costs and several prices are looked upon chiefly as a rather unimportant variant upon the general principles applicable to an implied typical case of single-product costs and prices. But is there any commodity of importance in trade that is not, at some stage, produced jointly with others? If we look at the final stage of production, the stage at which commodities and services pass to those who are the recipients of the final objective benefits, in short, if we look at retail trade, we shall see that at this stage nearly every distinguishable commodity is handled jointly with many others. If we trace the production history of any of these we shall find few exceptions to the rule that at every stage it was produced jointly with others.

My reading in economic theory has shown me two attributes in which economists, as a class, excel all other contemporary professional groups. I know of no equal to their ingenuity in inventing new refinements to patch up old theories, new qualifications of older, oversimplified rules. No professional class is so reluctant to abandon any generalization once it is forcefully and plausibly expressed. Particular economists, to be sure, are notorious for taking issue with others; there have been many warring schools. But always we have the eclectics who find good in all apparently irreconcilable theories and systems of theory and who patiently weave all threads of thought into word-fabric treatises called "principles of economics."

Perhaps no economist has combined these attributes in greater degree than Alfred Marshall. In addition to being a prolific inventor of qualitative differentiations on his own account he has utilized nearly all the theories of his predecessors. But when one looks in Marshall's writing for a statement of the relation of cost to price one must read the whole of his works. The net result of that reading is to find that nearly everything he wrote may be regarded as a gigantic system of qualifications upon the theorem that market price tends to equal cost of production to the representative firm. Moreover it is a confessedly incomplete system of qualifications.[7] Anyone who studies carefully the definition of his famous "representative firm"[8] will see at once why a nine hundred page treatise affords too little space within which fully to develop the function expressing the relation between cost of production and price.

There are two principal ways in which one might set about appraising critically the economists' theories concerning the relations between cost of production and market price. One may grant all the fundamental assumptions, tacit and expressed,

[6] The notion of constant cost is sometimes confused with that of "fixed charges." The latter idea properly relates to the classes of financial contracts a concern may have entered into; the former, to the classes of work done and to the mode of doing them.

[7] *Principles of Economics* (8th ed.), p. xii *et seq.*

[8] *Ibid.*, pp. 317-8.

which underlie their statements of principles and test those principles for consistency with one another and with the assumptions. But many of these economists suppose that their fundamental assumptions bear a marked resemblance to conditions that have a real existence in the world of affairs and that their principles describe approximately the events that occur in that world.

In all the theories so far put forward the causal nexus is the same. If the prospective selling price is not expected to exceed some defined prospective unit cost, or some defined differential cost, at a given physical volume of output that volume of output will either be curtailed to some lesser amount at which the unit cost or differential cost will be repaid, or else production will be discontinued if the defined cost cannot be recouped on any volume. Curtailment of volume produced in order to avoid loss reduces the supply to become available. This tends, so the argument runs, to increase market price, since demand schedules are independent of sellers' costs. Conversely, if the prospective price is high enough to permit more than recoupment of the defined cost at current volumes of production, larger output will result. This enhancement of supply will tend to depress price. Aside from perturbations in a market demand schedule, a rise in price implies an earlier anticipation of rise in cost of production. If the anticipated rise occurs the rise in price will be sustained.

For any of these theories to be approximately descriptive of actual price events two classes of approximately accurate estimates are indispensable: a forecasting of the future course of a price; and a forecasting of the future costs (of the defined type) to be incurred in production.

The forecast of price must, in some degree, be independent of the cost forecast because price may rise or fall in response to altered market demand schedules as well as in response to change in cost. Even the shortest range forecasts of particular commodity prices are subject to errors of large degree. Neither business men nor economists have achieved fame for success in this field except as second guessers. As to long range forecasts, such as are implied in economic theory as a condition to entry of a new, large-scale enterprise into the market, I need say no more than that they are still proper subject matter for astrologers rather than for business men or economists. Some such forecasts may turn out to be good; but neither in prospect nor in retrospect are we able to agree upon the relative rôles played by shrewdness and chance in these successes. Successes in enterprise seem to attend freedom to *alter* operating policy rather than accurate forecasts of prices.

It is not my purpose to appraise the goodness of price estimates. I merely allude to the difficulties of price estimating to indicate one source of weakness in classical theories. One can concede the existence of good future price estimates and still find grounds for disregarding the theories of the relation of cost of production to price. For future costs are supposed to be estimated also, future costs in a statistical form corresponding to whatever unit cost or differential cost the particular economist defines.

I am not without knowledge of the ways in which costs of many kinds are estimated, but I have never seen a cost estimating procedure that bore more than the most rudimentary resemblance to any definition of cost of (future) production as defined by cost of production theorists. I do not assert that estimates corresponding to the economists' definitions do not exist; I say only that they are not prevalent. Even if we suppose the producers, in most cases, neglect, or fail to state, differences between past costs and expected costs and act as though they expected future costs to conform approximately to past costs I can still say that the economists' theories are not descriptive of events. For no formula for unit cost and no procedure leading to the finding of a unit cost or a differential cost that I have ever seen conforms to the conditions of the economists' definitions.

To suggest to you the divergence between the economists' notion of cost or ex-

penses of production and the accountants' cost figures, let me take an arbitrary illustration and sketch a few of the typical differences. Let the price in question be the retail price of a carpenter's claw hammer, of given specifications. I choose this tool because of its relative simplicity. It is an assembly of a piece of shaped, seasoned hickory, a piece of shaped, specially tempered steel and a wedge.

Consider the origin of the handle. At the very outset we have a tangle of joint costs, not merely of lumber manufacture, but also of seasoning costs, of selling expenses and of general and administrative expenses. Nearly all costs up to the stage of first sale are joint costs of an indefinitely great and unknown variety of final products. To know whether or not the costs of our hammers bear any specified relation to final sale prices we should need to know just what relation exists between the selling price of the wood destined for hammer handles and the cost, to lumber manufacturers, of the various kinds and lots of wood ultimately used for that purpose. To know this latter relation we should have to unsnarl the whole tangle of lumber manufacturers' joint costs and analyze each class of cost or the cost of each operation into elements assignable to each class and lot of lumber and wood sold. Whether this can be done is not the point. The fact is that it is not done in accordance with economic theory, i.e., distribution of joint costs is not made in proportion to estimated sale price less estimated costs.

If any theorist invites my attention to the qualification that the *price paid* by hammer manufacturers, not the *cost to the manufacturer of the lumber*, is the cost which affects hammer prices I shall answer by putting the case of the integrated enterprise in which the hammer manufacturer runs his own sawmills or the case in which, through the device of the holding company, any prices superficially paid by one corporation to the other cancel out with respect to the holding corporation's interests.

Let us jump now to the plant in which hammers are made. Here the wood is cut and shaped. Not hammer handles only, but axe handles, maul handles and so on, are made. That is to say, our present manufacturer has the same problem of joint costs. But, by reason of his freer choice of sources of supply, he has an additional, though similar problem. Economy in the use of wood may dictate that the manufacturer buy for cutting and sorting a grade or grades of wood that would not be most economical if used alone for any one type and specification of handle.

A similar set of problems present themselves in connection with the steel head, still others arise in connection with joint processing, assembling, selling, and general administration. I could bring in the question of joint costs to the carriers who transport the materials and finished products and those of the dealers who sell to the final users. I could show that no two lumber manufacturers, no two steel manufacturers, no two hammer manufacturers, and so on have identical problems of joint costs. But my purpose is only to show that producers not only do not make the kind of estimates contemplated by cost of production theorists but that there is no ground for supposing that it will ever become practicable for them to do so.

Decisions to contribute more or less to a market supply cannot be based on a nonexistent type of estimates. If the types of estimate presupposed by the cost of production theorist were not only practically possible, but also prevailingly made, one need not doubt that an equilibrium of cost and price would occur. But until there is ground for hope that the essential estimates can be transferred from the realm of make-believe to the world of buying and selling, the classical and neoclassical theory of the relation of cost to price can be no more than a form of esoteric philosophy. Fantasies may serve as well as facts in founding a structure of logic, but they will not do at all as a basis for a science. The "economic man" of the classical economists has a rational mind; he lacks legs of truth.

STABILIZED DEPRECIATION

HENRY W. SWEENEY

Methods of the usual, present, orthodox type are unstabilized because they ignore all lack of uniformity in the value content of the measuring-unit in which the depreciation is expressed. If, for instance, a building cost $50,000 in 1910 and had an expected life of twenty years, with no final scrap value, the depreciation, according to the customary, straight-line method would be the unstabilized one of $2,500 for each of the twenty years regardless of whether, as thus stated in the dollar value of 1910, it was equivalent to $2,500 in the average general price level of each of such twenty years. Orthodox calculation of depreciation thus assumes that the original cost, when distributed as depreciation over subsequent periods, will continue to have the same economic significance as it had when incurred—or, in other words, that the monetary standard of measurement remains stable in value.

The chief merit of such an unstabilized depreciation method is the greater ease in theory and application resulting from the assumption of a higher degree of simplicity in the measurement of facts than is actually there.

I

A proper depreciation method should, as most writers imply, exactly maintain the capital invested in the depreciable asset; and such capital, as a preceding article has endeavored to demonstrate, should be the "real" capital, i.e., the general economic purchasing power represented by the cost of the asset. But for real capital to be maintained under customary dynamic conditions, depreciation on the original cost must, at the close of each period for which depreciation is to be computed, be re-expressed in the average general price level of that period.

If, for illustration, a fixed asset was acquired in the last minute of a fiscal period at a cost of $500, if its value was estimated to have been entirely consumed during the following period, and if the average general price level during such subsequent period was twice as high as that existing at the time the asset was acquired, the depreciation calculation should be not only equal to the original cost, inasmuch as all the value of the capital invested in the asset was consumed, but, moreover, should be twice such original cost, namely, $1,000, inasmuch as the expression, in average prices throughout the second period, of the real capital was twice the original amount. At the instant of acquisition the monetary cost of the asset, viz., $500, expressed the real capital invested. But when prices in general doubled, expression, in the changed price level, of the real capital also had to be double the original monetary cost of the asset.

If, similarly, at the termination of a period, one-fifth of the cost of an asset is to be charged off as depreciation, such one-fifth in the great majority of instances should not be calculated on solely original cost per books inasmuch as that figure is a price that was paid when the general price level was probably different from that existing throughout the current period, to which the amount of depreciation is to be charged. Otherwise, the amount charged off is likely to be quite different from the correct representation, in the current price level, of the actual, real-capital value estimated to have disappeared in the form of depreciation during such present period.

When prices have steadily risen since the acquisition date of a depreciable asset, orthodox depreciation methods will, other conditions remaining the same, maintain nominal capital and fail to maintain the much more significant real capital. And in a time of severe inflation, they will result in general consumption of the national economic capital, just as occurred in Ger-

many[1] where the people used a large percentage of their wealth believing it to be, instead, a large income. Even in the United States, which experienced an inflation much less extreme than in most foreign countries, depreciation computations based on original book costs failed to such an extent in maintaining the substances of fixed asset investments[2] that, as prices rose, the losses had to be met by withholding profits and by borrowing from the public. Thus it happens that one of the fundamental and guiding principles of orthodox accounting, viz., conservatism, is certain to be violated, and perhaps grossly violated, in periods of rising prices if calculation of depreciation continues to be based on original cost per books.

In Germany, during the severe inflation period, the orthodox practice of calculating depreciation on the basis of original book costs was eventually swept aside because accountants and business men came to perceive that, in maintaining the substance of capital, it was no longer useful. At first various supplementary measures were adopted, such as charging all new fixed-asset costs to expense and creating a special reserve to provide for maintenance of plant value and business efficiency (e.g., the prevalent Werkerhaltungskonto). Later, computation of depreciation on the basis of reproductive cost grew in popularity, which, indeed, is still evident from a survey of contemporary German depreciation theory. In the United States, although fault-finding with unstabilized depreciation methods was, like inflation, much less pronounced, it was, nevertheless, present, as may be seen from the occasional corporate policy of creating replacement reserves additional to those for depreciation[3] and from recent controversy concerning depreciation based on cost of reproduction.

Nor can the importance of the effects that incorrect computation of depreciation may have during a period of constantly rising prices be properly minimized on the ground that, first, depreciation is at best only an estimate[4] or that, second, a difference of several percentage units (as, e.g., between 5 per cent and 8 per cent) in a depreciation rate is comparatively insignificant. For, since practically every valuation is an estimate in one sense or another, if depreciation calculations are to be slighted because they are merely estimates, the door becomes wide open for entrance of slovenliness in all valuation procedure. And as for the second argument against careful depreciation calculation, investigation of typical industrial balance sheets and income statements will demonstrate that a difference of several percentage units in a rate that is based on a large plant investment value is likely to represent a large portion of the net income.

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[1] And even in countries where inflation never exceeded a very small fraction of that occurring in Germany, calculation of depreciation based on the older, lower original costs per books caused dire enough consequences to call forth loud admonitions. Regarding the effects in Belgium cf. e.g., Bayart, P., *Problèmes de la Stabilisation*, Paris, 1928, p. 12; and in France, for example, Bayart, P., *Les Effets de l'Inflation sur le Bilan au Point de vue Fiscal* (2nd ed. rev., 1926), Paris, pp. 128-133, and Billiet, E., "La Réévaluation des Bilans," *L'Action Nationale*, XXX, series N, Jan.-Feb.-March, 1929, Paris, pp. 7-8.

[2] One writer, describing the unfairness of allowing public utilities to set only such rates to the public as will enable the companies to maintain just original capital per books, even goes so far as to declare that, in present times, when prices are generally higher than when a large part of present public-utility plant investment was made:

". . . any man who is pleading for depreciation on original costs ought to realize that he is also in favor of confiscating private property. If once this is recognized, it might be an efficient check to this kind of calculation, especially in a land which surely owes so much to private initiative and daring, a large part of which is due to the security of property and profit." Schmidt, F., "The Basis of Depreciation Charges," *Harvard Business Review*, VIII, 3 (April, 1930), 261.

[3] The Pullman Company, for instance, after charging operations with $7,264,565.22, $7,954,685.46, and $9,148,169.06 as depreciation of cars for the respective fiscal years ended July 31, 1924, 1925, and 1926, set aside an additional $1,000,000 in each of such years as "Reserve for excess cost of replacement of cars."

[4] This argument is well refuted by Baldwin, H. G., *Accounting for Value as well as Original Cost*, The American Appraisal Company, pp. 56-62.

If, of course, the general price level has steadily fallen since a depreciable asset was acquired, depreciation methods based on solely the original cost will lead to *over*-maintenance of the real, economic (as opposed to the monetary) capital invested in the asset. Such a result is, however, also undesirable because the accounts, again, then fail to show exactly what is taking place. And in such a time of probably depressed business activity due largely to declining book profits and increasing real equivalents of money-value liabilities, the unnecessary burden represented by the over-maintenance may so depress profits as to cause formation of faulty decisions.

The outstanding objections to unstabilized depreciation procedure are, then, that it causes the real, economic capital invested in a depreciating asset to be almost invariably under- or over-maintained; and profit or loss, expressed in the price level of the current period, to be correspondingly over- or under-stated.

Another, minor objection appears in cases where employees' compensation depends wholly or partly upon the amount of profit earned, for in such instances orthodox calculation of depreciation upon the basis of original cost per books is likely to cause injustice to either the employees or the concern employing them. If, e.g., the price level has risen steadily for several years after a business has invested heavily in capital assets, the amount of depreciation calculated by the usual method for each such year will be too small, profit will be correspondingly overstated, and any compensation based thereon will be too great.

II

After showing that subsequent to a general-price change, a dollar differs from one in use before the fluctuation occurred, stabilized-accounting theory has stated that two such identically appearing but inwardly differing dollar measuring-units are, in effect, two respective dissimilar moneys. A 1920-dollar, worth somewhat over 50 per cent of a 1913 one, should, e.g., no more be directly combined with the latter than a dollar having, like that of the Straits Settlements, a par somewhat over 50 per cent of that possessed by the U.S.A. dollar, should be added to the latter and the total described as "two dollars." The actual consequences, upon depreciation and general accounting accuracy, of failing to distinguish between heterogeneous-dollar amounts may clearly be seen from the two illustrative cases presented below, the first a hypothetical one, but the second, actual.

Ordinary accounting fails, in periods of fluctuating prices, to preserve real capital and charge profit and loss with the correct amount of depreciation because it neglects to treat figures measured in inwardly unlike, though superficially similar, monetary units as though they were outwardly expressed in heterogeneous moneys. In order clearly to expose this weakness in the conventional procedure, the illustrative case below handles amounts that are measured in two different moneys, the English pound and the U.S.A. dollar, just as the conventional procedure treats figures that, although expressed in the same nominal unit, the dollar, are, in reality, representative of different moneys, like the 1920 and 1930 dollars.

To permit more tangible expression of ideas, the following assumed facts will form the framework of exposition:

A fixed depreciable asset worth £1,000, was invested January 1, 1927, by stockholders of the N Corporation, which began business therewith.
Correct depreciation was 50 per cent of cost per annum.
Net profit before depreciation was $3,000 cash, received evenly during the year.
All final net profit was to be paid out as dividends.
Rate of exchange: £1 = $5.

The original investment gives rise, in effect, to the following entries, which are, like ordinary-dollar amounts left unequalized from prior periods, expressed, to illustrate their true fundamental nature, in the

monetary unit wherein they initially appeared:

Fixed Asset

Jan. 1, 1927 A-Capital Stock..........*Dr* £1,000

Capital Stock

January 1, 1927 A-Fixed Asset.........*Cr* £1,000

The $3,000 worth of cash entering this business throughout 1927 is, like unstabilized-dollar figures for a current period, also recorded in terms of the money wherein it first appeared, thus:

Cash

Dec. 31, 1927 B-Profit and Loss........*Dr* $3,000

Profit and Loss

Dec. 31, 1927 B-Cash..................*Cr* $3,000

Two different units of measurement now appear in these accounts. One, the pound, is equivalent to five times the other, the dollar, just as in, for example, France, pre-war francs, worth five times as much as various post-war ones, appeared indiscriminately side by side with the latter. Orthodox accounting procedure, unobservantly treating all the amounts as homegeneously measured values, next computes depreciation. Because the asset book cost used as the base for this calculation is stated in pounds sterling, the result becomes necessarily expressed in the same money, too, thus:

$$£1{,}000 \times .50 = £500, \text{ depreciation.}$$

Although, up to this point, the account entries have been heterogeneously measured and thus misleading, they have not, so long as kept separate, been actually incorrect. Upon entry of the £500 depreciation, definite error does, however, appear. The debit and credit, each intended, by the well-meaning, but absent-minded procedure, to typify the proper consumed proportion of the asset cost, viz., £500, is, satisfactorily enough, recorded in the books as 500 money units. But in the process of entry, the monetary sign unthinkingly, but comprehensibly, employed to describe the amount of depreciation is that of the money currently happening to be more prevalent, namely, the dollar. So depreciation consisting of one-half £1,000 becomes recorded as $500. The depreciation-reserve credit, although expressed as $500, is, because 50 per cent of £1,000, really equivalent, however, to £500, but the profit-and-loss debit, likewise stated as $500, is so used in computing net gain as actually to represent $500. For it is deducted from a dollar figure, $3,000, and the remainder is then designated as a dollar amount, $2,500. Hence, the depreciation entry becomes finally equivalent to the following:

Profit and Loss

Dec. 31, 1927 C-Depreciation Reserve..*Dr* $ 500

Depreciation Reserve

Dec. 31, 1927 C-Profit and Loss........*Cr* £ 500

Conventional accounting procedure then closes out, to Surplus, the $2,500 balance in Profit and Loss and distributes it all as dividends, so that, as a whole, the accounts, although, in a practical case, doubtless expressed in dollars, actually are equivalent to the following:

Fixed Asset

Jan. 1, 1927 A-Capital Stock..........*Dr* £1,000

Depreciation Reserve

Dec. 31, 1927 C-Profit and Loss.......*Cr* £ 500

Cash

Dec. 31, 1927 B-Profit and Loss...... *Dr* $3,000

3,000

Dec. 31, 1927 Balance.................*Dr* $ 500

Dec. 31, 1927 E-Surplus................*Cr* $2,500

Balance 500

3,000

Capital Stock

Jan. 1, 1927 A-Fixed Asset............*Cr* £1,000

Surplus

Dec. 31, 1927 E-Cash..................*Dr* $2,500

Dec. 31, 1927 D-Profit and Loss........*Cr* $2,500

Profit and Loss

Dec. 31, 1927 C-Depreciation Reserve..*Dr* $ 500

D-Surplus 2,500

3,000

Dec. 31, 1927 B-Cash..................*Cr* $3,000

3,000

And upon termination of the year, although the financial status would, as shown by the orthodox, book figures below, be entirely expressed in homogeneous-looking dollar signs, its actual nature would be that set forth by the corresponding underlying equivalents, thus:

The N Corporation

Balance Sheet, December 31, 1927

	Figures per books	*Underlying equivalents*
Assets		
Fixed asset, at original cost	$1,000	£1,000
Less—Depreciation reserve	$ 500	£ 500
Net	$ 500	£ 500
Cash	$ 500	$ 500
Total assets	$1,000	?1,000
Proprietorship		
Capital stock	$1,000	£1,000

In this example the management presumably intended the depreciation provision to accomplish two things, first, to facilitate, by means of the depreciation-reserve credit, evaluation of the capital asset and, second, so to charge operations that the amount of gross income thereby withheld would be equivalent to the cost of whatever fixed capital was consumed in the form of depreciation. Actually, the first purpose has been, in effect, realized because the depreciation-reserve credit, although erroneously characterized as dollars, represents, at December 31, 1927, £500, one-half the asset cost. But the second aim has not been accomplished. Either the £500 profit-and-loss debit should have been converted into the current measuring-unit and thus expressed as $2,500; or the other entry in that account, viz., a $3,000 credit for income, should have been changed into the earlier money, pounds, and thereby stated as £600. If the former conversion, of pounds into dollars, had been made, the net profit would have appeared as $500. But if the latter conversion, of dollars into pounds, the net profit would have been £100. Both such results are, of course, mutually equivalent as well as correct, for £1=$5. Both methods would, moreover, have caused $2,500 instead of, as actually, only $500, to be withheld in the business—and $2,500 is, in this case, the current equivalent of the real capital consumed by depreciation. But the profit-and-loss debit, $500, although maintaining half of the 1,000 money units (pounds) comprising the fixed-asset initial cost, has not preserved the real capital consumed, which, at December 31, 1927, would be represented by either £500 or $2,500. Such actual $500 charge to operations has been equivalent, in fact, to only £100 (i.e., $500 ÷ 5), which is but 20 per cent of the original asset cost.

A practical illustration of how the orthodox depreciation method, by failing to distinguish between moneys similar in name but dissimilar in content, causes, as the preceding hypothetical illustration attempted to demonstrate, consumption of real capital and misstatement of profit, is supplied by the following German case, that of the Wickueler-Kuepper-Brauerei Actiengesellschaft. This example shows that the management was very unconservative while trying to take advantage of an apparently unusual opportunity to be ultra-conservative. The exhibits, appearing below, indicate that for the fiscal year ending October 31, 1923, the book value of each fixed-asset class was practically written off by being reduced to the purely nominal figure of one mark, instead of being depreciated by the usual periodic percentage for that one year. Despite, however, the superficially consequent over-

maintenance of capital and understatement of profit, careful analysis will reveal results diametrically the opposite. The cause of such error was, of course, orthodox accounting failure properly to allow for decline in the value of the measuring unit, the mark. The exhibits, as originally published,[5] follow.

Wickueler-Kuepper-Brauerei Actiengesellschaft
Elberfeld, Germany

Balance Sheet as of October 31, 1923

Assets

Land		ℳ 1
Buildings		1
Machinery		1
Brewing equipment		1
Liquid export equipment		1
Storage barrels		1
Transport barrels		1
Horses and wagons		1
Automobiles		1
Furniture and fixtures		1
Miscellaneous		3
Securities		9,117,864,000,009
Cash		78,163,452,373,275
Accounts receivable		1,285,689,400,825,604
Contingent claims against sureties	ℳ *10,173,987*	
Inventories: Beer, malt, hops, etc.		2,087,226,000,000,012
		ℳ3,460,196,717,198,913

Liabilities

Capital stock		ℳ 10,000,000
Mortgages payable		60,000
Reserves		3,121,837
Extraordinary reserves		431,382
Welfare reserve		856,084
Reserve for doubtful accounts		4,160,669
Accounts payable		2,556,494,898,046,079
Contingent liability on sureties	ℳ *10,173,987*	
Unclaimed dividends		80,055
Undistributed profits:		
Balance, November 1, 1922	ℳ 64,634.83	903,701,800,442,807
Profit for the year ending October 31, 1923	ℳ903,701,800,378,172.17	
		ℳ3,460,196,717,198,913

Wickueler-Kuepper-Brauerei Actiengesellschaft
Elberfeld, Germany

Profit and Loss Statement
Year Ending October 31, 1923

Income from sales of beer		ℳ2,799,902,719,694,709.28
Expenses:		
General expenses	ℳ1,896,200,917,339,204.11	
Depreciation	1,977,333.00	1,896,200,919,316,537.11
Net profit (transferred to balance sheet)		ℳ 903,701,800,378,172.17

[5] *Frankfurter Zeitung*, March 15, 1924.

The depreciation written off was calculated thus:

	Balance Nov. 1, 1922	*Balance Oct. 31, 1923*	*Difference written off as depreciation*
Land	ℳ1,371,224	ℳ 1	ℳ1,371,223
Buildings	479,388	1	479,387
Machinery	46,234	1	46,233
Brewing equipment	1	1	
Liquid export equipment	1	1	
Storage barrels	47,202	1	47,201
Transport barrels	33,290	1	33,289
Horses and wagons	1	1	
Automobiles	1	1	
Furniture and fixtures	1	1	
	ℳ1,977,343	ℳ10	ℳ1,977,333

Inasmuch as the amount charged off as depreciation is the exact difference between the total fixed-asset book values as of, respectively, the beginning and ending of the year, no expenditures for new acquisitions, improvements, and the like were, according to the accounts, made. But because a business of such size must have improved its plant and equipment to at least a minor extent, the conclusion must logically be that capital expenditures were incurred but were charged off to expense.

Apparently not content with such conservative procedure, the management decided, however, to be still more conservative by writing off what seemed to be too much depreciation. So it authorized the reduction of each type of fixed asset to a value of one mark. This was easy to effect without reducing profit very much because the total resulting depreciation charge was, to use a common saying, merely a drop in the bucket as compared with the other, inflation-distorted, book figures. Such pseudo-conservative procedure, adopted throughout Germany during 1922 and 1923, must have seemed a happy means of accomplishing two major aims at the same time because, first, it appeared to offer an easy way to be very conservative by charging to the present period all existing capital-asset values, some of which would, otherwise, have had to await the distant future before being completely written off, and yet, second, it enabled an initially high profit figure for the present period to remain but little diminished.

Unfortunately, however, the practice, although slightly more conservative than the customary method of charging off as depreciation only the periodic annual proportion of the fixed-asset costs, was, under the particular economic circumstances, very unconservative. In the case under discussion the amount of error resulting can not be exactly ascertained, nor, because of the lack of a conveniently obtainable complete set of German-corporation manuals[6] in the United States, can it be more than guessed. The following reasoning may serve, however, roughly to approximate both its probably enormous amount and its overwhelming importance.

Because the business, by its very nature, must have required a large amount of fixed capital for efficient conduct of its different industrial and transport operations, and because the fixed-asset values per books as of November 1, 1922, as listed above, must have been relatively small in comparison with the other, depreciated-mark, amounts on balance sheet and profit-and-loss statement for that date, such fixed-asset values must have been expressive of high mark

[6] Notably *Saling's Boersen-Jahrbuch.*

values—probably, for the most part, of even gold-mark values. But even if they had been inflated by 100 per cent of their underlying gold-mark costs, or, in other words, if the ℳ1,977,343 had represented a total gold-mark equivalent for only one-half thereof, viz., ℳ988,672, nevertheless, the 1,977,333 book marks (i.e., 988,667 gold marks) charged off as depreciation during the fiscal year, wherein the average worth of the paper mark equalled one fifty-billionth of a gold mark, should have been ℳ988,667 × 50,000,000,000 (namely, ℳ49,433,350,000,000,000) in order to have the same significance as, under the circumstances, the costs of the fixed assets had when those assets were originally purchased. In any event, however, if the company had expressed its depreciation charge in the measuring-unit of the same approximate average value as the unit in which most of the other items on the financial exhibits were stated, some such enormous figure as the one estimated should have appeared as depreciation, instead of the comparatively puny amount 1,977,333. But if the depreciation expense had been shown as 49,433,350,000,000,000, the final result of operations would have been a loss of 48,529,648,197,644,494.83 instead of a gain of 903,701,800,378,172.17! In other words, the loss would have been over fifty times greater than the profit that was shown.[7]

This illustration shows the very essence of the outstanding objections to unstabilized depreciation because it indicates what little relationship there may be between the current price level and the price level represented by a depreciation charge that is calculated on the cost of a depreciable asset acquired some years previously. And as it demonstrates the antiquity of the measuring-unit in which such a depreciation charge may be stated, it simultaneously indicates failure to maintain real capital and to derive a profit or loss figure that will have much meaning.

III

When prices continue to rise rapidly, accountants and business men begin to observe that the prevailing depreciation method, which bases calculation on original cost per books, does not seem to be maintaining the substance of the capital originally invested in the depreciating asset. The orthodox depreciation method then begins to be adversely criticized and others are suggested as remedies. Of these that consequently become most commonly proposed, depreciation on cost of reproduction[8] seems usually to receive the greatest amount of favor. Such a typical development occurred even in the United States, where inflation was comparatively slight.

Advocates of calculating depreciation on the basis of reproductive cost stated, during the latest period of rising prices, that the best proof of error in the orthodox method was that the proceeds of the depreciation reserved throughout the life of an asset were usually insufficient, after a steady increase in prices, to provide replacement, even when the depreciation calculations were absolutely accurate. They concluded, therefore—and correctly—that, because maintenance of the physical form and efficiency of an asset is preferable to maintenance of merely its original money cost, the orthodox method of basing computation of depreciation on book figures left much to be desired when general price levels were advancing. But they concluded also—and, as will be seen, incorrectly—that the best way to maintain the substance of capital invested in a depreciating asset was to maintain the asset physically and materially by calculating depreciation on *reproductive cost.*

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[7] Of perhaps incidental interest is the fact that the mortgages payable of ℳ60,000 as of October 31, 1923 were worth, in gold marks, about one ten-millionth of the cheapest postage stamp.

[8] Reproduction cost means "the actual amount necessary to be expended in order to reproduce the present plant at present-day prices under the original physical conditions." Maltbie, W. H., *Theory and Practice of Public Utility Valuation*, p. 33.

The following quotation expresses the typical view of the reproductive cost proponents:

All recognized methods result in charging to operating account the original cost of property retired. This policy, in view of the higher present level of prices, is wrong . . .

The purpose of management certainly must be to maintain the physical plant, and to keep up production without drawing upon capital funds. If this be true, then, when the price level has risen, the charge to operation for renewals should not be the original cost of property retired, but the cost of new property which, in function and capacity, is required to replace the old.[9]

Depreciation based on reproductive cost is, however, objectionable. The fundamental reason, as previously explained, is that such a method endeavors to maintain visible, instead of real, economic, general-purchasing-power, capital. Consequently, the result may be physically to preserve capital whose worth in the general system of values is itself declining or rising.

The nature of this fundamental objection was, apparently, overlooked by both sides. And because the members of the orthodox school, who continued to favor computing depreciation on the basis of book cost, were accustomed to think of capital as a book value[10] and not as a material object, they failed, likewise, to perceive that their opponents were also trying fundamentally to maintain capital. The conventionalists felt that capital was represented by original book cost and that, because the object of sound depreciation policy should be to maintain capital, the calculation should be based on such first cost and not on reproduction value.[11] At this point, however, the customary accounting assumption of general-price-level stability led them into error. If the assumption had been justified, then depreciation should, as they claimed, have been calculated on original book cost because maintenance of such a type of capital thereby would have resulted in preservation of the same general purchasing power as the cost of the asset originally represented. (But, also, if the assumption had been justified, probably the reproduction-cost basis would never have become prominent, because individual price levels, of which the prices of fixed assets form a part, would then in all probability seldom have varied relatively much.)

The orthodox school, therefore, on the basis of its premises, concluded—and correctly, if accidentally—that depreciation should not be calculated on reproductive cost. But it also continued to conclude—and, because of the invalidity of its basic assumption, incorrectly—that the computation ought to depend upon the book cost.

As a consequence of the rapid rise in prices during and after the recent great war, the previous high degree of solidarity existing in the opinions of accountants throughout the world became disrupted. Many then adopted the contemporaneously radical view that depreciation should be based on cost of reproduction. However, after the importance of the subject had begun substantially to wane during the subsequent periods of comparatively stable price levels, these rebels returned in large numbers to the ranks of those who had steadfastly continued to hold the old traditional views. The reproduction-cost method was, therefore, it would seem, a forward step that traversed about half the distance toward the goal of real-capital maintenance. It was doubtless a safer and more conservative plan of procedure to adopt during the inflation years than the old theory, because it gave rise to higher depreciation charges—charges probably more nearly related to those that would have resulted from attempt to preserve original, real, economic capital.

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[9] Bauer, J., "Renewal Costs and Business Profits in Relation to Rising Prices, *The Journal of Accountancy*, XXVIII, 6 (Dec., 1919), 413 f.

[10] For example, Finney, H. A., *Principles of Accounting*, II, ch. 40, pp. 3-4; and Dillman, J. F., "Accounting for Values or Dollars," *Management and Administration*, XI, 2 (Feb., 1926), 118.

[11] As, e.g., Jackson, J. H., "Some Problems of Depreciation," *The Journal of Accountancy*, XXXI, 2 (Feb., 1921), 81-102.

The present tendency in public accounting investigations of businesses that, in preparation for refinancing, desire to have their balance sheets reflect increases in the values of their capital assets as the result of appraisals, is to show on the accompanying income statements of, usually, the most recent five years, depreciation calculated on the appraisal valuations. The purpose of this is to indicate what such earnings (which serve as the main basis for formation of decisions regarding recapitalization) would have been if the depreciation charges to be expected in the future because of the increased, appraisal values had existed in the period covered by the investigation. Because such procedure bases depreciation on appraised values, which are usually representative of recent current reproduction costs, it is open to the charge of unwittingly attempting to approximate the maintenance of material capital. It is, nevertheless, probably a step in the right direction, although another step remains to be taken.

By yielding depreciation figures that should usually approximate those of stabilized-depreciation procedure, reproductive-cost depreciation practice possesses the notable merit of more nearly maintaining real capital and accurately stating profit or loss than does the orthodox method. Thus the cost-of-reproduction procedure is safer to adopt. Because, however, its aim is to preserve physical-capital investment, in spite of likely deviation, as previously explained, in the relation of such capital to the average value of other goods and services, it finds itself exposed to two major objections. The first of these is that it results in under- or over-maintenance of real, economic capital; the second, that it causes misstatement of profit or loss.

IV

The method that is, for conciseness, herein designated "stabilized depreciation" has already been outlined in the foregoing criticisms. It is founded upon belief that the capital to be maintained is real, economic capital, which is represented by the general purchasing power of original cost, and that the price levels in which profit-and-loss figures are expressed should be homogeneous enough to prevent the appearance of gross inaccuracies. Its practical means of attempting to realize these aims is, obviously, to express depreciation as the current-general-price-level equivalent of the portion of original book cost estimated to have been consumed in operations during whatever period happens to be under review. Combining the admissible conclusion of the orthodox school—that original cost should be depreciated—and the admissible conclusion of the reproductive-cost school—that depreciation should be computed on some basis other than original cost *per books*—it appears as a method intermediate between these two opposing schools of thought.

The fundamental difference between ordinary and stabilized depreciation methods is that, whereas the former is based upon original cost per books, the latter rests upon original cost adjusted for the change in average price levels. And the underlying difference between stabilized depreciation and reproductive-cost depreciation is that, whereas the former is based upon the current-*general*-price-level equivalent of original cost, the latter depends upon the current-*special*-price-level equivalent of original cost (viz., cost of reproduction). Or, otherwise expressed, the ordinary depreciation method is concerned with maintenance of nominal, monetary capital; the stabilized type with preservation of real, economic capital; and the reproductive-cost type with keeping physical, material capital intact.

Interesting to observe is that the essence of stabilized depreciation, namely, that the original cost of an expense should be expressed at its current-general-price-level equivalent, has occasionally been described by other[12] writers, although, apparently,

[12] The present writer's first published exposition of the theory appeared in "Effects of Inflation on German Accounting," *The Journal of Accountancy*, XLIII (March, 1927), 186-188.

no application to depreciation methods ever followed.

Perhaps the clearest and most logical explanation of the reasoning underlying stabilized depreciation is the following:

> But there is colorable ground for an argument that the retention of the price paid is not really representing the original cost, when there has been a change in general price levels, i.e., when money has depreciated.
>
> Suppose one had 100,000 bushels of wheat on hand and by act of government the legal definition of a bushel was changed so as to make it include only one-half the former contents. To report 200,000 bushels on hand at the later date would be the only proper expression of the actual facts.
>
> Somewhat similarly if an asset had been purchased for $100,000 (of a given standard of weight and fineness of gold) and the government later arbitrarily reduced the content of the gold dollar by one-half, would it be correct in later statements to represent the cost as $100,000 or as $200,000? If the dollar shrinks not by direct legislation but by gradual inflation, is there not some justification in holding that at a later day the more correct expression of the actual cost would be in terms of the then dollar equivalent to the former dollars paid out?[13]

The concept of computing, by index numbers, as of respective subsequent periods, the current general-price-level equivalents of original costs in order to obtain corrected bases for contemporary calculations appears also in the following quotation, which discusses the asset basis for public-utility charges:

> . . . possibly some index number designed to rise and fall with the general level of commodity prices, might conceivably be chosen as the proper basis by which to regulate charges.[14]

The same idea is likewise expressed by the following excerpts:

> If the service was worth $100 in 1913, and if $226 in August, 1919, will buy as much of commodities in general as $100 bought in 1913, then public utility service (or any other service) that was worth $100 in 1913 is, *ceteris paribus*, worth $226 today.[15]
>
> The purpose of the depreciation charges is to return to the investor the equivalent of, not only the same number of dollars invested, but also the same kind of dollars invested.
>
> For illustration, an investor who in the year 1915 paid fifty thousand 1915 dollars for a steam shovel with a useful life of five years, and in 1920 finds himself in possession of only fifty thousand 1920 dollars as depreciation reserve, has not recovered the equivalent of the fifty thousand 1915 dollars which he invested in the shovel.[16]

Other writers have described, in less detail, various general features of stabilized depreciation; for example:

> Cost figures, properly adjusted to allow for changes in the money unit, give a correct expression of the original investment.[17]

Declaring that business men think of an investment in capital assets as dollars, another writer states:

> . . . the assumption and the practice which is predicated on it are unsound both in theory and in fact, for by following it, either more or less than the value equivalent of the original dollars invested in property may be recovered, depending on whether prices are higher or lower when the recovery is effected.[18]

The cardinal principle underlying preservation of real capital is that the contemporaneous general-purchasing-power equivalent of the original outlay for capital used up should be charged against the period in which such consumption takes place. If, e.g., material bought for $100

[13] Comments by H. R. Hatfield on "A Symposium on Appreciation," *The Accounting Review*, v, 1 (March, 1930), 14.

[14] Bonbright, J. C., "Progress and Poverty in Current Literature on Valuation," *Quarterly Journal of Economics*, XL, 2 (Feb., 1926), 305.

[15] Elmes, C. F., "Price Levels in Relation to Value," *Mechanical Engineering*, XLII, 10 (Oct., 1920), 556.

[16] Chenoweth, J. M., "Depreciation of the Dollar," *The Journal of Accountancy*, XXXI, 6 (June, 1921), 472. In applying the fundamentally sound premise quoted above, however, he restricted the meaning of original-cost equivalent to specific purchasing power over the particular kind of asset being depreciated, and hence finally reached merely a tentative reproductive-cost theory.

[17] Paton and Stevenson, *Principles of Account-* [illegible] 462.

[18] Baldwin, op. cit., p. 8.

is consumed in a period whose average prices are 10 per cent higher than those existing when the goods were purchased, and if operations are charged with, not $100, the original cost per books, but $100 \times 110 \div 100$, or $110, real capital will, other things remaining equal, be maintained and current cost of material be correctly calculated.

Most profit-and-loss entries represent present-period income and expenses whose respective amounts are contractually set figures that, after being originally agreed upon, have been currently paid for and remain expressed in nominal money units. Because their real worths usually depend upon the average values of the monetary units, during the periods covered by such items, employed to measure them, they are known as "money-value" entries. Examples are ordinary contract sales prices and all such profit-and-loss items as salaries and wages, advertising fees, commissions, telephone and telegraph charges, dues, interest, and discount, are like rent, paid for in the current period without constant regard to changes in the worth of money.

Occasionally there will appear a revenue or expense whose financial amount has been computed with reference to the average worth possessed by the money measuring-unit throughout the contemporaneous period. An illustration is a wage adjusted monthly or quarterly for change in the cost of living. Inasmuch as the monetary expression of each such entry rests upon the underlying current-period worth of the monetary unit, the item is known as a "real-value" one. In the case of money-value entries the real worth was, on the other hand, seen to depend upon the contemporaneous nominal money amount.

Besides the two classes above, which represent profit-and-loss entries paid for during the fiscal year wherein they enter operations, there is another group. This, consisting of deferred expenses and income, typifies items settled for in a period preceding that in which they penetrate the loss-and-gain account. Examples, ordinarily, are undepreciated capital assets, unconsumed materials and supplies, prepaid salaries, rents, royalties, interest, unexpired insurance premiums, and deferred income. These are all classed as real-value items because the proper profit-and-loss entry for each, namely, current equivalence of original real cost, requires that adjustment be made for whatever general value change in money has taken place since the payment arose. Since accruals, the opposite of deferred entries, are customarily expressed in the price levels of the respective periods represented by their income and expense aspects, rather than in preceding ones, they do not need to be considered in this discussion.

The necessity of recomputing original book costs to allow for price changes became well recognized during the great inflation period in Germany,[19] although it was unwittingly subordinated to the aim of preserving only physical, material capital.[20] The formula frequently advo-

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[19] Thiele, W., in his *Wiederbeschaffungspreis und Preiswucher*, bases his recommendations for employing reproductive equivalents in cost calculations on legal, instead of the customary, economic, considerations.

[20] Schmidt, e.g., specifically states that his method aims to keep capital physically intact and thus uninfluenced by monetary-value fluctuations. ("Gewinn und Bilanzwert," *Het Internationaal Accountantscongres*, Amsterdam, 1926, p. 409.) In order systematically to employ what he regards as the only correct method of calculating profit, he advocates distinguishing between accounting for property (Vermoegensrechnung) and accounting for income (Erfolgsrechnung or Umsatzrechnung). The net change, if any, between the original and reproductive costs of each expenditure is then to be reflected in the property accounting up to the moment when the expenditure is charged to operations or set forth in a balance sheet, and only reproductive cost as at the instant of sale or consumption is to be allowed entry into the profit-and-loss reckoning. Thus, believing that asset-appreciation change, because it appears regardless of eventual sale or use, should be differentiated from the value variation known as gross profit, and being convinced that true operating gain results only when selling price exceeds full cost of reproduction at the instant of sale, he asserts that by solely such a segregation of accounting functions can a business man be informed as to whether, in any given case, a sale should be made or an expenditure permitted to become an expense. These ideas are concisely stated in his article, "Geldentwertung und

cated there for setting sales prices was, "Cost of reproduction plus profit,"[21] although, of course, adoption of this basis did not, as was generally recognized, necessarily insure ability to sell at the prices thus calculated, inasmuch as market conditions might not permit, as would be the case if competitors were erroneously calculating their sales prices on the basis of merely original costs per books and were, consequently, selling too low. Advocates of the formula justifiably believed,[22] however, that recognition of the underlying economic facts would usually result in less eventual loss.

Prices in the United States have ordinarily not moved rapidly enough up or down within the space of several years to make much inaccuracy result from failure to charge real-value expenses other than depreciation into profit and loss at present general-price-level equivalents. Some writers[23] assert, however, that, during the World War, costs and accounts in this country were unintentionally falsified because materials bought in previous years were customarily charged to operations at original figures per books.

Opponents of basing depreciation computations on reproductive costs have, in the United States, usually managed to discredit such a method, first, by showing that if it is followed, consistency requires all other expenses to be similarly recalculated on the basis of their respective reproductive costs, too; and, second, by then claiming that in such event the entire cost-of-reproduction theory becomes impractical. The proponents commonly permit their position to be weakened by ignoring this attack. Instead, they should, first, admit that consistency, which is, of course, desirable, requires all expenses to be restated at corresponding prices to reproduce if depreciation is computed on that basis; but they should, second, next indicate the faulty reasoning whereby their adversaries conclude that the depreciation plan thus becomes impractical. They can expose this fallacy by showing that because most expenses become such shortly before or after the book entries for them are made, the respective differences in price levels between the dates of use and of record are so likely to be so slight that in normal times the original costs of all expenses, with the possible exception of depreciation, may, unadjusted, be charged to operations without causing any significant inaccuracies.[24] And in the case of depreciation, the argument should conclude, despite the presence during recent years of prices that may, in general, be characterized as relatively stable, a need may still exist for stabilized re-expression in those instances where the depreciable assets were acquired or constructed in periods remote enough in the past to be representative of materially higher and lower prices than contemporaneous ones.

The stabilized method may produce depreciation figures that are quite unexpected. But if they are more accurate than those of the orthodox one, any surprise occasioned by their amounts, instead of being an objection to the stabilized procedure, constitutes a point in its favor. For

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Bilanz," *Geldenwertung und Unternehmung*, Berlin, 1923, pp. 11-17 and also, according to a comment written by him while reading this section of the manuscript, in his *Die organische Tageswertbilanz* (3rd, revised edition of his previous *Die organische Bilanz im Rahmen der Wirtschaft*, which was published at Leipzig in 1922), Leipzig, 1929, and his *Der Wiederbeschaffungspreis des Umsatztages in Kalkulation und Volkswirtschaft*, Berlin, 1923.

[21] Reproduction cost meant, to Schmidt, the market prices of all three respective cost elements (material, labor, and overhead) at the instant of sale, such to be calculated according to the state of productive efficiency existing in the immediate present and not when the original costs were actually incurred. *Die organische Tageswertbilanz* (3rd ed. rev., 1929), Leipzig, p. 136.

[22] Ibid., pp. 149-150, for example.

[23] E.g., DuBrul, E. F., "Unintentional Falsification of Accounts," *N.A.C.A. Bulletin*, IX, 8 (May 15, 1928), Sec. I, p. 1038. He advocates, however, using reproductive, instead of real-cost, expense equivalents. Krebs, W. S., *Outlines of Accounting*, II, pp. 959-976.

[24] Baldwin reveals knowledge of this argument in defending his reproductive-cost depreciation method; *op. cit.*, p. 65.

the greater the unexpectedness, the more significant the probable difference between adjusted and unadjusted figures and hence the greater the benefit likely to be derived from use of the stabilized method.

To one writer[35] "real" capital means "physical" capital. As previously explained, however, the word "real," although objectionable, due to the likelihood of its being frequently confused with "material" and "tangible," is employed throughout the present article because of its long and similar use, in economics, to mean, more or less, "general purchasing-power equivalent of," as in, e.g., the expressions "real income" and "real wages."

In the degree that stabilized-depreciation procedure is accurately followed, to the same extent do the desired maintenance of general-purchasing-power capital and the more accurate statement of profit or loss become approached. Partially offsetting these prominent advantages of stabilized depreciation are, however, that it is, for at least the present, new, untried, imperfectly understood; and that its theory and application are somewhat complicated (probably more so than appears true of the reproductive-cost method and certainly more so than may be said of the unstabilize conventional procedure).

SUMMARY

Unstabilized, orthodox depreciation procedure assumes that the original fixed-asset book cost, when distributed as depreciation charges over later periods, will continue to represent the identical economic significance that it had when initially incurred. The great advantage derived from making such an assumption is the resulting simplicity in theory and computation; the great disadvantages are, respectively, probability of under- or over-maintenance of real capital and misstatement of profit and loss. In view of the important rôle that may be played in a given case by accuracy, the disadvantages are quite liable more than to offset the advantage.

The major merit of reproductive-cost depreciation procedure is, perhaps, that under ordinary dynamic price conditions it should yield depreciation figures nearer in amounts to those produced by the stabilized, real-capital method than should the old orthodox procedure. By endeavoring to maintain material capital despite probable variance in the general economic significance thereof, the reproductive-cost depreciation method becomes vulnerable to two main accusations. These are, respectively, that it, like the orthodox procedure but perhaps to a less degree, causes under- or over-maintenance of real capital and inaccurate calculation of profit and loss. It represents, however, a forward step in depreciation practice.

The thesis of stabilized depreciation is that the original cost of a depreciable fixed asset should be so distributed over subsequent periods that the depreciation charge in the current average-price level for each such period will represent the same real-capital portion as it would if expressed in the general price level of the date when the asset was acquired. Stabilized-depreciation procedure, other things being equal, possesses the great advantages of, respectively, maintaining real, economic capital and correctly stating (so far as price levels are concerned) the depreciation to be charged off. Its major disadvantages are its novelty and complexity.

In order to maintain real capital exactly and to state profits and expenses accurately, real-value expenses other than depreciation should likewise be stabilized. Practical considerations will usually, however, not require such refined procedure. Stabilized depreciation need cause no income-tax complications.

[35] Hull, G. L., "Plant Appraisals—Their Treatment in the Accounts," *The Accounting Review*, II, 4 (Dec., 1927), 305.

EARLY TRANSACTION ANALYSIS

A. C. Littleton

Early writers on bookkeeping were intent upon giving instruction in the bookkeeping practice of the day and indulged in very little theorizing. Even in connection with transaction analysis, underlying theory must be interpreted from the practices described. The writers did not enter into explanations of how transactions should be thought out or why one did thus and so, but confined themselves strictly to telling in detail how to perform the acts of record-keeping. An attempt to formulate the early reasoning involved in analyzing transactions into debits and credits must therefore be hypothesized out of the phraseology used and by trying to read between the lines of the practical explanations of how the record was to be made.

An analysis of a few examples of ledger entries will show the probable reasoning behind the wording used and open the way to a surmise about the probable basis of early transaction analysis. Three sets of entries are given below:

Ledger Entry 1 (1436-1439)

From the ledger of *Fillippo Borromeo e comp.*, the London branch of a large Italian trading house (Milan):[1]

Giovanni Bindotti must give on 8th March s.4 d. 4 per Giovanni Vanuzzi, to whom credited on folio 13 .... £0.4.4

Giovanni Bindotti must have on the 8th March £19.11.11 by Borromei of London, to them fol. 4 .... £19.11.11

This entry is from the account books themselves and is in the bilateral form as shown above; Roman numerals were used.

Ledger Entry 2 (1494)

From the only example of ledger entries given by Paciolo in the first printed work on bookkeeping:[2]

Francesco, son of Antonio Cavalcanti, shall give, on Nov. 12, 1493, £20, *s*4, *d*2 which he promised to pay to us at our pleasure for Ludovico, son of Pietro Forestani, page 2: .... £20, *s*4, *d*2.

Francesco, son of Antonio Cavalcanti shall have, on Nov. 14, 1493, for £62, *s*13, *d*6, which he brought himself in cash; posted cash shall give at page 2 .... £62, *s*13, *d*6.

This entry is Paciolo's illustration of the practices current in his time in Venice. While it does not purport to be copied directly from any actual book of account, yet one may easily feel satisfied that Paciolo is authoritative.

Ledger Entry 3 (1522)

Two items from the ledger (1519-1527) of Thos. Howells, a dyer of cloth in London:[3]

(a)

John de Lassys and John de Rowso of Muros in Galicia ought to give acc't of Broadcloth shipped in S't Maria de Rodys .... £74, 0*s*, 0*d*.

(b)

R. Donnington ought to have in barbing of a short Plonket that Th. Petter delivered you .... 8*d*.

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[1] From a monograph *"Archivo Storico Lombardo," Giornale della Società Storica Lombarda* by Dr. Gerolamo Biscaro, Milan, 1913, quoted by P. Kats in "Double Entry in England before Hugh Oldcastle," *The Accountant* (London), January 16, 1926. Also see an article by B. Penndorf in The Accounting Review, September, 1930.

[2] *"Ancient Double Entry Bookkeeping"* by John B. Geijsbeek, Denver, Colorado, 1914, wherein the original book is photographically reproduced and translated.

[3] Quoted in *"The History of the Worshipful Company of Drapers of London,"* by Rev. A. H. Johnson, Vol. II, p. 253.

These old entries call for several observations. In the first place it will be noted that each entry expresses a complete thought. Very likely the wording is much as if the thought had been spoken; it probably would have been easily understood by anyone who heard it so phrased.

Perhaps the completeness of the thought expressed will be clearer if the old entries are rendered more freely than the literal translations given above, and if they are slightly modernized. The entries are restated below.

The 1,436 Entries Restated

B. "must give" $4 to us (as proprietors or agents) because on March 8 he assumed the burden of V's prior debt to us. .... $4.

B. "must have" back from us (as proprietors or agents) the $19 deposited with us on March 8 .... $19.

The 1,494 Entries Restated

F. "shall give" $20 to us because on Nov. 12 he promised us he would pay on demand the debt which L. owed to us. .... $20.

F. "shall have" back from us the $62 he deposited Nov. 14 with us in cash .... $62.

The 1,522 Entries Restated

L. and R. "ought to give" me an accounting in money or in goods for the broadcloth shipped in their care . . . etc. .... $74.

D. "ought to have" $.50 from me for fuller's work done on my cloth .... $.50.

In addition to being framed here in complete sentences, all of the entries, it will be observed, contain certain "words of accountability," that is to say, words which apparently were regarded as just as indispensable in making an accounting entry out of an otherwise straightforward sentence, as in modern times the words of negotiability (i.e., "or order") are regarded as indispensable in a bill of exchange. The words of technical significance in the above entries are outlined below.

	For Debits:	For Credits:
Entry 1	—must give	must have
Entry 2	—shall give	shall have
Entry 3	—ought to give	ought to have

These phrases all express the same basic idea; the differences are only variations in emphasis. Clearly the idea of "give" (i.e., return to the proprietor or agent) was directly associated with debits, and "have" (i.e., receive from the proprietor or agent) with credits. The debit side of a bilateral account was the "give" side and the credit side was the "have" side.[4]

Thus it appears that the early ledger entries were fairly complete sentences expressing complete ideas. They were, in fact, memoranda of what the writer wanted to avoid forgetting and probably were cast into the forms of expression of ordinary speech. What we find written in the old books gives us, therefore, some idea of how fifteenth century merchants thought their transactions through for recording purposes. The forms used were probably modeled on similar practices in much earlier use. The point of view was always personal as is evidenced by the personal pronouns expressed or clearly implied in the entries. The medieval merchant, for the most part,

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[4] It is interesting to note that this basic concept is preserved in the designations, undoubtedly based on the Latin, given to the two sides of an account in Italian, French, and German.

Latin		Italian	
Debent dare	Debent habere	Dare	Avere

French		German	
Doit	Avoir	Soll	Haben

Each term used for debit and credit either is, literally "give" and "have" or can be traced to these verbs. Note also that the "rule of thumb" for analyzing debits and credits which was so much used by later writers is not unrelated to these technical terms. The rule was in two parts: (1) "Debit what is received," that is to say: what I now receive I *must give* back; (2) "Credit what is given," that is to say: what I now give I *must have* returned to me.

conducted his business upon an individual proprietorship basis (or simple partnership) and not infrequently mixed such purely personal affairs as household expenses and legacies with his business records of goods.

From the wording of the entries it is also to be observed that the records were stated in the future tense. "Must give," "shall have," "ought to give" are phrases which look to the future. This sense of futurity is brought out more clearly in the entries as restated.

The old ledger entries, then, contain these three characteristics:

1. The entries are complete sentences expressing complete ideas.
2. The entries are written from the point of view of the proprietor or agent in question, i.e., his accounts with others.
3. The entries were definitely stated as memoranda of expected future occurrences, not of present happenings.

How would these ideas of framing ledger entries be stated in a general rule We do not know; none of the early writers tried to reduce the process to a general rule. The nearest they got to it was to have rules for specific accounts such as: "Goods Account is debited for Purchases." Since they stated no general rules we may frame some for ourselves. The following hypothetical rules are offered in the attempt to reduce to simple concise statements the ideas of transaction analysis which seem to have been at the basis of the formulation of double entry bookkeeping:

(a) A sum is to be entered in the record as "shall give," if the person involved is obliged to return to me at a later date an equivalent for what he has just now received from me.

(b) A sum is to be entered in the record as "shall have," if the person involved is entitled to receive from me at a later date an equivalent of what he has just now given me.[5]

These statements of principle may be abbreviated somewhat as follows:

(a) X shall later give what he now receives —(i.e., Dr. X.).

(b) Y shall later receive what he now gives —(i.e., Cr. Y.).

However lacking in definite historical proof the hypothesis may be which attributes the early development of personal accounts to medieval bankers, the fact remains that the characteristic form of the ledger record was well established at an early date and before there was any evidence of any records beyond personal accounts. Just how that record was first expanded to include impersonal accounts is unknown. But it seems not improbable that the impulse came from traders rather than bankers, although the two occupations merged into each other much more then than now. It seems quite reasonable to expect that when the use of ledger accounts was extended into trade, the incompleteness of the record would become much more apparent, for here was a variety of goods to be kept track of and accounts were necessary for the partners' investments as well as ordinary accounts with persons.

But with the new accounts in use there was an additional difference beyond the mere increase in number of accounts. Whereas the banker, keeping only accounts with persons, made *double* entries only when transferring one person's debt to another (simple loans made or deposits received requiring only a single entry each in a personal account), the trader, with impersonal accounts also in his scheme of records, must record *all transactions* in double, for otherwise some of the accounts in his ledger would not receive a record of all of the transactions which affected them.

The relation of the proprietor to the scheme of accounts was new and it complicated the analysis of transactions beyond the simple logic of memorandum-making

[5] Compare with the following German explanation of the technical terms Debit and Credit:

"Der Empfänger eines Wertes wurde als Schuldner, der einen Gleichwert geben soll, mit 'Soll,' der Geber eines Wertes hingegen als Gläubiger, der einen Gleichwert zu empfangen hat, mit 'Hat,' Besw. 'Haben,' bezeichnet."—Stern, "*Buchhaltungslexikon*," 3d Ed. (1927), p. 246.

which was implied in the wording of the old ledger accounts. It was difficult to consider accounts abstractly; all of them were viewed in the same light as if they were personal accounts, that is, as records which showed what shall be given back or received back by the original party to the transaction recorded. In simple deposit or loan accounts this was easy enough: X shall give back to Proprietor (who has just made X a loan). When cash and goods accounts were introduced, the same reasoning applied. For goods bought from Z on credit, they reasoned: Goods *shall give* to Proprietor (who now places the responsibility upon that account), Z *shall have* or receive from Proprietor (what Z now places in his hands).

In trying to frame a memorandum in terms of *shall give* and *shall have* in order to record the above transaction, the trader would have to decide who "shall give" and to whom, also who "shall have" and from whom. The trader's own goods account, it would appear, could no more have a responsibility direct to an outsider (as Z) than B, a borrower of money from A, could have a responsibility direct to a depositor, D, who lodged the money with A. In a similar way, Z could not be conceived as entitled "to have" from any one other than the proprietor to whom he had given the goods; Z could not pass the proprietor and reach the goods themselves or the person who now had them. One debt was from Proprietor to Z; and the other debt was from Goods Account to the Proprietor. Thus it would have been impossible in those days to reason out a two-sided ledger entry (as we would today) which would debit Goods and directly credit Z who supplied them on time, since there was no privity between these two. The reasoning of the time produced a four-element expression of the transaction; ours produces a two-element form. Their analysis, however, reaches the same conclusions as ours in regard to the accounts involved *when and if the contrasting "Proprietorship" items are cancelled against each other.*

This is theory which is not stated in the early bookkeeping texts; in a sense it is "deduced" theory, for the early writers did not explain the logic behind their transaction analysis. They did, however, mention certain bits of technique which by themselves are quite mysterious but which fit in marvelously well with some such scheme of transaction analysis as the above. Two of these matters will be mentioned.

The old practice (Paciolo, 1494; Manzoni, 1534) was to separate the debit and credit elements of the journal entry by two symbolic marks, such as $\gtrless$ or //. These, it is concluded, may represent the omission of the two proprietor items which were needed in reasoning out a transaction but which were useless in the written record. Apparently the mental process of transaction analysis was expected to be communicated by the teacher rather than by the text, for the texts did not explain these symbolic marks. It is possible that bookkeeping by that time had already become so "formalized" in the hands of its practitioners as to include technical methods to be carefully followed by novices in spite of a lack of clear understanding.

The other item in the old books which shows, when the key is found, that the writers had a reasoning theory of transaction analysis is from Manzoni (1534), who writes that the four principal things pertaining to buying, selling, receiving, paying, exchanging, loaning, and gifts are:

1. The one who gives
2. The one who receives
3. The thing given
4. The thing received[6]

The application of this classification to the above transaction where goods are

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[6] Jehan Ympyn (1547) stated the matter thus: "And to enter to the first part you must consider that in all accounts there are two special parts, as a debtor that owes and a creditor that lends. These things considered, then follow also two other points, which are the sum of money that is owing and the cause and reason why it is ought (owed?). These specially remembered, you may then by this exemplar easily draw out and enter all your reckonings." (Reproduction by P. Kats in *The Accountant*, August 20, 1927, p. 264.)

bought on credit from Z would give the following:

Item 1, one who gives = Z (who gives goods to the proprietor)
Item 2, one who receives = Proprietor (who receives goods from Z)
Item 3, thing given = Proprietor's (promise to pay Z)
Item 4, thing received = Goods (brought to business by Z)

This classification placed in a hypothetical journal entry of the early form would be:

(a) "Goods" *shall give* to Proprietor (what Proprietor intrusted to the goods account)
(= item 4) (= item 2)
(b) from Proprietor, Z *shall have* (what the latter gave for Proprietor's promise)
(= item 3) (= item 1)

Somewhat modernized the entry becomes:

(a) G owes (P)
(b) (P) owes Z

After cancelling the opposing and unnecessary "proprietor items," the transaction finally assumes the rather modern technical form of journal entry:

Goods owes Z

In fifteenth century terminology it would read:

by Goods // to Z

In strictly modern form where the position of the words relative to each other and a double column for figures are the technical devices for indicating debit and credit items in an entry, the transaction would be:[7]

Goods	XX	
Z		XX

The above hypothesis may not succeed in showing what the actual reasoning process was, but it may help us to see that the incompleteness of the textual explanations of the early writers did not conceal the possibilities which existed even at that early date of a real reasoning process being involved in double entry bookkeeping.

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[7] For a somewhat less detailed discussion of the significance of the parallel lines in the old journal entries and of the meaning of the "four principal things" mentioned by Manzoni, see Hardcastle, *Accounting for Executors*, (1903) lecture 1; and Geijsbeek, *Ancient Double Entry Bookkeeping*, (1914), pp. 15, 85.

In the present analysis the attempt has been made to associate the fourfold classification of the elements of a transaction with the system of transaction analysis herein previously developed from the technical ledger terms "shall give" and "shall have."

ACCOUNTING AND THE COURTS

L. L. Briggs

Owing to the comparative youth of the accounting profession, court decisions affecting its members are few and scattering. However, the importance of these adjudications to the profession is in inverse proportion to their number. An attempt is made in this article to state the significant parts of the American and English cases which have been decided during the past half century.

Since accounting has attained the dignity of a profession, its members are subject to the same rules in their practice as are the members of other skilled professions. These rules have been stated in Cooley on Torts (2d ed.), page 277, in these words:

> Every man who offers his services to another, and is employed, assumes the duty to exercise in the employment such skill as he possesses with reasonable care and diligence. In all those employments where peculiar skill is requisite, if one offers his services, he is understood as holding himself out to the public as possessing the degree of skill commonly possessed by others in the same employment, and, if his pretensions are unfounded, he commits a species of fraud upon every man who employs him in reliance on his public profession. But no man, whether skilled or unskilled, undertakes that the task he assumes shall be performed successfully and without fault or error. He undertakes for good faith and integrity, but not infallibility, and he is liable to his employer for negligence, bad faith, or dishonesty, but not for losses consequent upon mere errors of judgment.

According to Sir Ernest Pollock:

> Whoever takes on himself to exercise a craft holds himself out as possessing at least the common skill of that craft and is answerable accordingly. If he fails, it is no excuse that he did the best he, being unskilled, actually could.

Therefore, when an account accepts an engagement, the client has a right to expect that in the performance of his duties the accountant will exercise the average ability and skill of those engaged in his profession. His work is of such technical character and requires such peculiar skill that an ordinary person cannot be expected to know whether the duties are performed properly or otherwise, but must rely upon the integrity and ability of the accountant as to the thoroughness and accuracy of the services rendered.

First, let us see what the courts have said in regard to the duties of accountants. According to Lord Justice Lindley in In re London and General Bank, No. 2 (1895) 2 Ch. 673:

> His duty is to ascertain and state the true financial position of the company at the time of the audit, and his duty is confined to that. . . . How is he to ascertain that position? The answer is, By examining the books of the company. But he does no discharge his duty by doing this without inquiry and without taking any trouble to see that the books themselves shew the company's true position. He must take reasonable care to ascertain that they do so. Unless he does this, his audit would be worse than an idle farce. Assuming the books to be so kept as to shew the true position of a company, the auditor has to frame a balance sheet shewing that position according to the books and to certify that the balance sheet presented is correct in that sense. But his first duty is to examine the books, not merely for the purpose of ascertaining what they do shew, but also for the purpose of satisfying themselves that they shew the true financial position of the company. . . .

Further along in the case, the Lord Justice said:

> Such I take to be the duty of the auditor; he must be honest, i.e., he must not certify what he does not believe to be true, and he must take reasonable care and skill before he believes what he certifies is true. What is

reasonable care in any particular case must depend upon the circumstances of that case. Where there is nothing to excite suspicion, very little inquiry will be reasonably sufficient, and in practice I believe business men select a few cases at haphazard, see that they are right, and assume that others like them are correct also. Where suspicion is aroused, more care is obviously necessary; but, still an auditor is not bound to exercise more than reasonable care and skill, even in cases of suspicion, and he is perfectly justified in acting on the opinion of an expert where special knowledge is required. . . . It is satisfactory to find that the legal standard of duty is not too high for business purposes, and is recognized as correct by business men.

The opinion of Chief Justice Lord Russell of Killoween as set forth in Thomas v. The Corporation of Devenport (1900) L.R. 1 Q.B. 16 follows:

. . . I do not subscribe to the doctrine that his sole duty is to see whether there are vouchers, apparently formal and regular, justifying each of the items in respect of which the authority seeks to get credit upon the accounts not before the auditors for audit. I think that is an incomplete and imperfect view of the duties of the auditors. I think an auditor is not only entitled, but justified and bound to go further than that, and by fair and reasonable examination of the vouchers to see that there are not amongst the payments so made payments which are not authorized by the duty of the authority, or contrary to the duty of authority, or in any other way illegal or improper. If he discovers that any improper or illegal payments appear to have been made, his duty will certainly be to make it public by report to the authority itself, and the burgesses who create that authority.

Lord Justice Lopes, in In re Kingston Mill, No. 2 (1896) L.R. 2 Ch. D. 279, said:

. . . It is the duty of an auditor to bring to bear on the work he has to perform that skill, care and caution which a reasonably competent, careful and cautious auditor would use. What is reasonable skill, care, and caution must depend on the particular circumstances of each case. . . . If there is anything calculated to excite suspicion he should probe it to the bottom; but in the absence of anything of that kind he is only bound to be reasonably cautious and careful.

Justice Stirling, in Leeds Estate Building and Investment Company v. Shepherd, (887) 36 Ch. D. 787, held that the duty of an auditor goes beyond verifying arithmetical accuracy of the balance sheet. He must inquire into its substantial accuracy and ascertain that it contains the particulars required by the articles of association and is properly drawn us so as to give a correct representation of the condition of the company's affairs.

In Fox and Son v. Morrish, Grant and Company, 35 T.L.R. 126, the court held that where an accountant is engaged to check accounting records, and there is no arrangement that he need not verify the correctness of the cash and bank balances, he commits a breach of duty if he checks the books without such verification and neglects to notify his client of the omission.

In respect to knowledge of the charter or articles of incorporation of the company being audited, Lord Justice Lindley, in In re Kingston Mill, No. 2 (1896) L.R. 2 Ch. D. 279, said:

. . . Auditors are, however, in my opinion bound to see what exceptional duties, if any, are cast upon them by the articles of the company whose accounts they are called upon to audit. Ignorance of the articles and exceptional duties imposed by them would not afford any legal justification for not observing them . . .

Although there has been considerable written on the subject of the accountant's responsibility in regard to inventories, the writer has been unable to find an American case on the point. However, there are several English decisions in which the point is considered. In Squire Cash Chemist v. Ball, 106 L.T. 197, Cozens-Hardy, Master of the Rolls, said:

Although it is not the duty of accountants to take stock in auditing the accounts of a business, they may well call for explanation of particular items in the stock sheet.

According to Lord Justice Lopes in In re Kingston Mill, No. 2 (1896) L.R. 2 Ch. D. 279:

It is not the duty of an auditor to take stock; he is not a stock expert; there are many matters in respect to which he must rely upon the honesty and accuracy of others . . .

Justice Vaughn Williams, in In re Kingston Cotton Mill, No. 2 (1896) L.R. 1 Ch. D. 331, said:

. . . but with regard to the stock-in-trade . . . they certainly were not entitled to rely upon the manager's certificate if an ordinary careful examination of the books ought to have made them suspect that statement. Now, it is plain to me that if the auditors had added to the stock-in-trade at the beginning of any year the purchases of raw material in that year, and deducted therefrom the sales, they must have seen that the statement of the stock-in-trade at the end of the year was so remarkable as to call for explanation, and they called for none. It is said that it is no part of the duty of an auditor to take stock. I agree it is not, but when it is said that it is no part of his duty to test the accuracy of the manager's certificate by a comparison of the figures in the books that require auditing, I cannot agree. . . .

The court held the auditors responsible for preference dividends paid because they accepted without investigation a grossly overstated inventory figure prepared by a trusted manager and placed it upon the balance sheet and profit and loss statement, thereby deceiving the directors as to net worth and the profits for the year. This decision was reversed by Lord Justice Lindley, in In re Kingston Cotton Mill, No. 2 (1896) L.R. 2 Ch. D. 279 on the ground that the auditors were not wanting in reasonable care in not verifying the manager's returns. The court said:

. . . there was nothing on the face of the accounts to excite suspicion, and I cannot see how, in the circumstances of the case, it can be successfully contended that the auditors are wanting in skill, care, or caution in not taking Jackson's figures.

In Squire Cash Chemist v. Ball, 27 T.L.R. 269, the court held that an auditor who is appointed to investigate the condition of a business is under obligation to make a reasonable and proper investigation of the accounts and stock sheets, and if anything appeared which would cause a reasonably prudent man to think something was wrong, he must call his employer's attention to the fact. The auditor is entitled to rely upon documents vouched by servants of the business, unless he has reason to believe such servants to be dishonest.

The responsibility of accountants for failure to detect defalcation or falsification of the records by employees is a point which has been considered by several courts. In City of East Grand Forks v. Steele, 121 Minn. 296 (1913), the defendants, representing themselves as expert accountants, in February, 1909, examined the books of East Grand Forks for the year 1908 with special attention to the records of the city clerk who collected various fees. They were paid $150 for this audit. In December, 1909, the defendants contracted to make a similar investigation and audit for the years 1908 and 1909 for $500. They carried out the contract and reported everything to be in satisfactory condition and that all funds were accounted for. Later, the state examiner discovered that the city clerk had embezzled $1,984.26 in 1908, and $5,339 in 1909 before the investigation was started. The surety company which bonded the clerk was insolvent so there was no opportunity for the city to recover its loss from that concern. The city of East Grand Forks instituted a suit against the accountants to recover the amounts defalcated and the fees paid on the ground that the defendants failed to discover the irregularities on account of incompetence and negligence. In his decision, Chancellor Taylor said:

The damages claimed on account of the losses resulting from the defalcations of the clerk and the insolvency of his surety are too re-

mote to be recovered, without showing the existence of special circumstances, known to defendants from which they ought to have known that such losses were likely to result from a failure to disclose the true condition of affairs. Such losses are neither the natural nor the proximate consequences of the failure of defendants to make a proper audit. Neither are there any facts shown from which it may be inferred that a loss from either of these causes was or ought to have been contemplated, when the contract was made, as likely to result from a breach of duty on the parts of the defendants.

The court held, however, that if the plaintiff could prove that through the incompetence or negligence of the defendants the report was in substance misleading and false, it could recover the $650 paid to the defendants in fees. The court reasoned as follows:

... If, from the want of proper skill, or from negligence, they did not disclose the true situation, they failed to perform the duty which they had assumed, and failed to earn the compensation which plaintiff had agreed to pay them for the proper performance of such duties.

Chancellor Taylor continued with these words:

... There may be circumstances under which the negligence of an expert accountant may make him liable for losses, as where he is employed to determine the amount that should be exacted from a surety for the default of his principal; but the facts alleged in the complaint do not bring this case within any such rule.

In Craig v. Anyon, 208 N.Y.S. 259 (1925), stockholders who had suffered a large loss through fraud of an employee in making unauthorized payments which were concealed by falsification of the books, attempted to recover the loss from the auditors employed on the ground that it was through the negligence of such auditors that the loss was not discovered. The court held that the loss was not entirely a result of negligence of the auditors but was mainly due to trusting an employee too much. The plaintiffs were awarded $2,000, which was the amount of the fee paid. This decision was affirmed by the Supreme Court of New York in 242 N.Y. 569 (1926).

In Smith v. London Assurance Corporation, 96 N.Y.S. 820 (1905), the court held that public accountants who were employed on an express agreement frequently to check a company's cash account in one branch of its business, and verify items thereon, were liable for sums embezzled by an agent of the company, because of their wilful and negligent failure to perform their undertaking.

Lord Justice Farwell, in Cuff v. London and County Land and Building Company, Ltd., (1912) 1 Ch. 440, held that a company which had lost money through defalcation conduced by negligence of auditors in performing their duties could refuse auditors access to the books and discharge them.

In Mead v. Ball, (1911) 106 L.T.N.S. 197, the court held that an accountant employed by the plaintiff to investigate the financial condition of a certain business was not liable for losses of the plaintiff which resulted from an additional investment in the business because it was not proved that the negligence of the accountant had caused the damage.

Next, let us consider the responsibility of accountants for false reports to stockholders and directors. In In re London and General Bank, No. 2 (1895) 2 Ch. 673, an auditor presented a confidential report to the directors calling their attention to the insufficiency of the securities in which the capital of the company was invested, and the difficulty of realizing them, but in his report to the shareholders he merely stated that the value of the assets was dependent on realization. As a result of this action the stockholders were deceived as to the condition of the corporation, and a dividend was declared out of capital. The court held that the auditor was guilty of misfeasance and was liable to make good the amount of the dividend paid.

In the earlier case, Leeds Estate, Build-

ing and Investment Company v. Shepherd, (1887) 36 Ch. D. 787, the balance sheets on which illegal dividends had been paid were prepared by the manager. The assets were overestimated. The auditor did not examine the articles of association but accepted the statements of the manager and certified the accounts from time to time. Justice Stirling held that as the improper payments by the directors were the natural and immediate consequence of the breach of duty on the part of the manager and the auditor, they were liable in damages to the amounts so paid. The auditor, however, was able to evade liability by pleading the Statute of Limitations.

What is the liability of an accountant who audits the books of a company for a prospective investor who loses money as a result of depending upon a false statement resulting from the negligence of the accountant? (This point was before the court in Squire Cash Chemist v. Ball, 27 T.L.R. 269.) The court held that the plaintiff failed to show that the alleged negligence of the accountant had induced him to invest in the business and had thus caused the loss which was sustained.

In In re Republic of Bolivia, (1914) L.R.1. Ch.D. 139, the court held that if the balance sheet which the accountants have audited does not show the true financial condition of the company and the company thereby suffers damage, the burden is upon the auditors to show that such damage is not the result of any breach of duty on their part. However, adequate warning in the audited accounts as to the wrongful payments appearing in such accounts, bringing the wrongful payments to the attention of the company, will free the auditors from further liability.

The question of an accountant's liability to third parties who lose by depending upon a false report resulting from negligence of such accountant is one of vital interest to the profession. In Le Lievre v. Gould, (1893) 1 Q.B. 491, Lord Esher, Master of the Rolls, said:

> A man is entitled to be as negligent as he pleases towards the whole world if he owes no duty to them.

In Landell v. Lybrand, 264 Pa. 406 (1919), public accountants were employed by a corporation to audit its books. The plaintiff, Landell, bought eleven shares of stock in the corporation on the basis of the report prepared by the accountants. This report had been shown to Landell by one who suggested that he purchase the shares. Landell claimed the report to be untrue, and, having relied upon it and lost considerable money, he claimed damages. The court said:

> There were no contractual relations between plaintiff and defendants, and, if there is any liability from them to him, it must arise out of some breach of duty, for there is no averment that they made the report with intent to deceive him. The averment in the statement of claim is that the defendants were careless and negligent in making their report; but the plaintiff was a stranger to them and to it, and, as no duty rested upon them to him, they cannot be guilty of any negligence of which he can complain....

The leading case in respect to the liability of accountants to third parties is Ultramares Corporation v. Touche, Niven and Company, 255 N.Y. 170 (1931). In February, 1924, Touche, Niven and Co., a firm of public accountants, for the fourth successive year, audited the books of Fred Stern and Co., Inc., of New York, a rubber importer and dealer. The certified balance sheet showed a net worth of more than a million dollars. Ultramares Corporation loaned Fred Stern and Co., Inc., various amounts on the basis of this statement. In December, 1924, the rubber company went bankrupt, owing Ultramares Corporation a large sum. The latter company, in November, 1926, brought action against Touche, Niven and Company for the amount of their loss on the charge of negligence. At the trial, a second charge asserting fraud was added but the court dismissed this without submitting it to the jury. Facts brought out at the trial showed that

accounts receivable had been overstated about $700,000 by an employee of the Stern organization and that this overstatement was not detected by the accountants because no verification of the accounts was made; that errors of about $300,000 had been discovered in the inventories; that the same accounts had been pledged to two, three, and four banks at the same time; and that there was ground for suspicion of the accounts payable. It was evident that the company was insolvent when Touche, Niven and Company certified the statements. The jury gave a verdict in favor of the plaintiff for $187,576.32. The appellate division affirmed the dismissal of action for fraud but reversed the cause of action for negligence. The Court of Appeals reversed both findings of the appelate division by sustaining the trial court in respect to negligence and ordering a new trial on the charge of fraud. In his opinion, Chief Justice Cardozo said:

The defendants owed to their employer a duty imposed by law to make their certificate without fraud, and a duty growing out of contract to make it with the care and caution proper to their calling. Fraud includes the pretense of knowledge when knowledge there is none. To creditors and investors to whom the employer exhibited the certificate, the defendants owed a like duty to make it without fraud, since there was notice in the circumstances of it, making that the employer did not intend to keep it himself. . . . A different question develops when we ask whether they owed a duty to these to make it without negligence. If liability for negligence exists, a thoughtless slip or blunder, the failure to detect a theft or forgery beneath the cover of deceptive entries, may expose accountants to liability in an indeterminate amount for an indeterminate time as to an indeterminate class. The hazards of a business conducted on these terms are so extreme as to enkindle doubt whether a flaw may not exist in the implication of a duty that exposes to these circumstances. . . .

In regard to representing a fact true to the knowledge of the auditors, the court maintained that:

. . . If such statement was made, whether believed to be true or not, the defendants are liable for deceit in the event that it was false.

The court added:

. . . A representation, even though knowingly false, does not constitute ground for an action of deceit unless made with the intent to be communicated to the person or class of persons who act upon to their prejudice. . . .

After stating that liability for negligence, if adjudged in this case, would extend to many professions other than accounting, the court quoted from Moch Co. v. Rennselaer Water Co., 247 N.Y. 160, as follows:

Everyone making a promise having the quality of a contract will be under a duty to the promisee by virtue of the promise, but under another duty apart from contract, to an indefinite number of potential beneficiaries when performance has begun. The assumption of one relation will mean the involuntary assumption of new relations inescapably hooked together.

The court continued:

Our holding does not emancipate accountants from the consequences of fraud. It does not relieve them if their audit has been so negligent as to justify a finding that they had no genuine belief in its adequacy, for this again is fraud. It does no more than to say that if less than this is proved, if there has been neither reckless misstatement nor insincere profession of an opinion, but only honest blunder, the ensuing liability for negligence is one that is bounded by the contract, and is to be enforced between the parties by whom the contract has been made. We doubt whether the average business man receiving a certificate without paying for it and receiving it merely as one among a multitude of possible investors, would look for anything more.

The defendants attempted to excuse omission of inspecting fictitious invoices by invoking practice known as testing and sampling. They claimed to have examined about 200 invoices but none of the fictitious ones was among them. In discussing this practice, Chief Justice Cardozo said:

. . . Verification by test and sample was very likely an efficient audit as to accounts regu-

larly entered upon the books in the usual course of business. It was plainly insufficient, however, as to accounts not entered upon the books where inspection of the invoices was necessary, not as a check upon accounts fair upon their face, but in order to ascertain whether there were any accounts at all. If the only invoices inspected were invoices unrelated to the interpolated entry, the result was to certify a correspondence between the books and the balance-sheet without any effort by the auditors, as to $706,000 of accounts, to ascertain whether the certified agreement was in accordance with the truth. How far books of account fair upon their face are to be probed by accountants in an effort to ascertain whether the transactions back of them are in accordance with the entries, involves to some extent the exercise of judgment and discretion. Not so, however, the inquiry whether the entries certified as there, are there in very truth, there in the form and in the place where men of business training would expect them to be. The defendants were put on their guard, by the circumstances touching the December accounts receivable, to scrutinize with special care. A jury might find that with suspicions thus awakened, they closed their eyes to the obvious, and blindly gave assent.

In respect to the liability of the accounting firm for the acts of subordinates, the court said:

Whatever wrong was committed by the defendants was not their personal act or omission, but that of their subordinates. This does not relieve them, however, of liability to answer in damages for the consequences of the wrong, if wrong there shall be found to be....

The court summarized as follows:

We conclude, to sum up the situation, that in certifying to the correspondence between balance-sheet and accounts that the defendants made a statement as true to their own knowledge, when they had, as a jury might find, no knowledge on the subject. If that is so, they may also be found to have acted without information leading to a sincere or genuine belief when they certified to an opinion that the balance-sheet faithfully reflected the ... business.

In the opinion of the writer, this decision is authority for the rule that accountants are not responsible for negligence to third parties of whom they have no knowledge when the contract is made with the client, but they are responsible where third parties are damaged by fraudulent commissions or omissions. Without such an attitude on the part of the courts the practice of public accounting would be an extremely risky undertaking.

Weld-Blundell v. Stephens (1920), L. R. App. Cas. H. L. 956 is an unusual decision involving the responsibility of an accountant. A man employed a chartered accountant to investigate a company in which he was interested. In a letter to this accountant, the employer inserted libelous statements in regard to two officials of the company under investigation. The accountant handed the letter to a partner who carelessly left it at the office of the company. The manager of the concern found the letter, read it and communicated the contents to the two officials about whom the statements were made. These men sued the employer for libel and recovered damages. The employer then sought to recover from the accountant the damages and costs paid to the officials on the ground of breach of implied duty to keep secret the letter of instructions. In the lower court, the jury gave the employer damages. The case was appealed to the House of Lords and that body held that the employer's liability for damages did not result from a breach of duty on the part of the accountant and the latter was ordered to pay nominal damages only.

The law is not unreasonable in its requirements for accountants. According to Lord Justice Lindley, in In re Kingston Cotton Mill, No. 2 (1896) L.R. 2c Ch. D. 279:

The duties of auditors must not be rendered too onerous. Their work is responsible and laborious, and the remuneration moderate. ... Auditors must not be made liable for not tracking out ingenious and carefully laid

schemes of fraud when there is nothing to arouse their suspicion, and when those frauds are perpetrated by tried servants of the company and undetected for years by the directors. So to hold would make the position of an auditor intolerable. . . .

In the same decision, Lord Justice Lopes said:

. . . An auditor is not bound to be a detective, as was said, to approach his work with suspicion or with a foregone conclusion that there is something wrong. He is a watchdog but not a bloodhound. He is justified in believing tried servants of the company in whom confidence is placed by the company. He is entitled to assume that they are honest, and to rely upon their representations, provided he takes reasonable care. . . .

Lord Justice Lindley, in In re London and General Bank, No. 2 (1895) 2 Ch. 673, said:

. . . An auditor, however, is not bound to do more than exercise reasonable care and skill in making inquiries and investigations. He is not an insurer; he does not guarantee that the books do correctly shew the true position of the company's affairs; he does not even guarantee that the balance sheet is correct according to the books of the company. If he did, he would be responsible for error on his part, even if he were himself deceived without any want of reasonable care on his part, say, by the fraudulent concealment of a book from him. His obligation is not so onerous as this.

There is at least one decision in regard to the ownership of the worksheets made by the accountant in carrying out an audit. In Ipswich Mills v. Dillon, 260 Mass. 453 (1927), the plaintiff sued Dillon, a firm of public accountants, to obtain possession of worksheets made by the defendants in making an audit of the plaintiff's mills. Justice Carroll reasoned as follows:

The work sheets, as defined by the trial judge, were the defendants' property. They were made by them while engaged in their own business. The paper on which the computations were made belonged to them. They were not employed to make these sheets. The sheets were merely the means by which the work for which the defendants were employed might be accomplished. The title to the worksheets remained in the defendants after the computations were made. In the absence of an agreement that these sheets were to belong to the plaintiff, or were to be held for it, they were owned by the defendants. . . .

To recapitulate: Accountants are subject to the same laws as are the members of the other skilled professions. They undertake to perform their duties with the skill and ability that an average accountant possesses, but they are not responsible for errors of judgment if they are reasonably cautious and careful. In case of suspicious circumstances, their obligations become greater. They are expected to know the contents of the charter or articles of incorporation in order that they may know whether or not the provisions are being carried out. Accountants are under no obligation to take inventories and they may accept the figures of employees if there is no reason for doubting the honesty of such persons. They are usually not responsible for the failure to detect defalcations by the employees of their client, although the fee paid may be recovered if the employer can prove incompetence or negligence. In England, auditors have been held liable for losses resulting from false statements being presented to stockholders and directors of a corporation. Accountants are not liable for negligence to third parties unknown to them at the time of making the engagement contract with the client but they are responsible where third parties are damaged by their fraudulent acts. The courts endeavor to keep the obligations of accountants within reasonable limits. Finally, in the absense of an agreement to the contrary, worksheets made by accountants in carrying out an audit belong to them and not to the client.

BUDGETING AND CONTROL OF MACHINERY

A. P. R. Drucker

To budget machinery raises many difficult problems. The first problem is to determine the period which the budget should cover. In budgeting the sales and production of a business, the fiscal period, usually a year, is the basis followed. A monthly detailed budget supplements the annual budget.

There are several reasons for using the year as the basis for budgeting sales. First, it is the period covered by the profit and loss statement. Second, the year is a comprehensive enough period to include all the seasonal changes, and thus the relation between seasons may be determined. Third, the yearly budget provides a basis by which comparisons of similar periods in different years, or full years may be fairly made.

These reasons also hold good for the budgeting of production on a yearly basis, productivity depending on the same seasonal fluctuation as do sales. In budgeting machinery, however, the fiscal year may not be the logical period. There is no relation between the fiscal year and machinery production; expenses that are due to the use of the machine have nothing to do with the yearly period. Even those machine expenses that are caused by time are not in the least connected with the year.

Nor is there any equality in the production of the machine from year to year. The machine becomes less and less efficient every day, every month, and every year. The year, however, is no more a stopping point for machine production, expenses, or depreciation than is the month, day, or any other period. There is no more reason to compare the production of a machine by years than by months, weeks, or days.

Of course, if these were the only objections to budgeting machinery on a yearly basis, it might well be followed, since sales quotas and production are estimated on this basis, and machinery is an accessory to production. A more significant objection is that a yearly basis is misleading. The expense of each machine during the fiscal period is usually charged to the production of the machine for the same period. This practice is not correct, for it distributes the expenses of the machine equally. During its first year (when it is 100 per cent efficient) there is little repair or replacement necessary; maintenance is at its lowest cost. Hence the machine expenses charged to the product of that year are very low. Not so during the last year of the machine's life. Maintenance is more costly, repairs and replacement are heavy. Hence the operating expenses of the machine now charged to the product are very high. This year's product, then, through no fault of the production, factory, or management, is more costly than that of the previous years, due to the method of basing the machine budget on the fiscal period of a year.

If we consider the question of efficiency, the fallacy of the above method is even more pronounced. The first year, with 100 per cent efficiency, the machine produced, let us say, 100,000 units. The cost of the machine per unit of production was therefore low. During the last year of its existence, with only 60 per cent efficiency, it produced, say, 60,000 units. But the expenses for that year have increased with the result that the cost per unit of product is a great deal higher than in the first year. An illustration will make this point clear. Suppose a machine is bought for $11,000, which we estimated could last five years, total replacements being $2,800. Total production during the five years of its life will amount to 100,000 units.

Under the present method of charging cost on the basis of the fiscal period, we would have yearly changes in the expenses of the machines. During the first year, the average cost per unit of production would

be .12; the second year, .169; the third year, .22; the fourth year, .30 and the fifth year, .37. Is it not more equitable to average the total cost of the machine during its lifetime and spread this cost on the basis of production? The average unit cost is then .218.

The other method is not fair to the product of the last year of the life of the machine. The use of the machine in producing the goods in the first year really helped to bring about the need for heavier maintenance, repairs, and the lowering of the efficiency in later years. Hence, the entire output of a machine, therefore, should bear *equally* the expense of maintenance and repair, of all inefficiency, and of depreciation incurred during the life of the machine.

Harrison (in *Standard Costs*) comments as follows on this practice:

> This method, when the costs were tied up with the general books, as they invariably were when the installation of the system was supervised by professional accountants, undoubtedly gave reliable information as to the actual labor and material costs of the various parts, assemblies, and finished machines produced. In the case of burden, however, the serious mistake was usually made of distributing to cost all of the factory burden in the month regardless of the amount of production, which practice resulted in wide variations in costs (from period to period) and in overstating the inventory value.

But the practice of the Harrison method is even more faulty than that of the old. For under this method, the heavier expenses and the inefficiences of the old machine are borne by the product of other machines, or borne by other activities. For this plan contemplates charging the extra burden of inefficiency and idle time to profit and loss of that period. Such a charge to profit and loss simply throws the burden of cost of goods produced by an old machine on other activities of the business for the year which is not fair to the other activities.

The most equitable method of distributing machine costs is to spread the cost and expense of the machine equally over all expected production during its life. The product of the first year would not only pay for the apparent depreciation realized during the year but would also be charged with a part of the cost of repairs, replacement, the cost of maintenance that is to be paid in the succeeding years.

This can best be attained by budgeting machinery, not on the basis of the fiscal year, but rather on the basis of the life of the machine. When a machine is installed, the following estimates should be determined:

1. The length of the useful life of the machine.
2. The scrap value of the machine.
3. The total cost of maintenance.
4. The amount of repairs and replacement the machine will require during its useful life.
5. The amount of betterment, if any, and its effect on the life and efficiency of the machine.
6. The units the machine can produce during its life, or the number of hours the machine can work efficiently during its life.

By adding the cost of the machine less scrap-value to the cost of maintenance, repairs, and replacement, and dividing this amount by the estimated number of units which it will produce or the number of hours it will be able to work efficiently, the correct cost of unit of product, or the cost rate of the machine per hour chargeable to the product is obtained.

Continuing the above illustration: a machine which cost $11,000 has an estimated life, according to the appraiser's report, of four years, at the end of which it will be sold as scrap for $1,000. In addition, maintenance during its life will cost $5,000, repairs, $4,000, replacement, $4,000, and betterment which will prolong its life another year, $2,800. The total cost and expenses of the machine during its useful life of five years will then amount to $21,800. The number of items the machine will produce during its lifetime is 100,000, from which it may be concluded that the cost of production per unit will be .218. This

charge should be made against each unit of production provided no errors are disclosed and no new factors enter into the cost of the machine.

There are several methods of recording these items on the books of the concern. The simplest way is to set up memoranda accounts of all the future cost of the machine when it is installed in the factory. The first thing to do, however, is to estimate or appraise the useful life of the machine. For illustration, assume that the life of the machine is five years, with the help of replacement. The next step is to estimate the total expenses during its lifetime. Set up memoranda accounts for the total maintenance, repairs, and replacements for the entire useful life of the machine. Then determine the units of production or the number of machine-hours which may be anticipated.

At the end of the first fiscal year, the actual amount of maintenance for the year will be known. The difference between this amount and aliquot portion of the memorandum account should be found. A journal adjustment will then be made, debiting maintenance account for this difference and crediting Reserve for Machine Maintenance.

Another journal entry will be made debiting Repairs to Machines with the correct portion of the amount of the memorandum account for repairs and crediting Reserve for Repairs to Machinery. The same adjustment should be made for replacements. In addition, the usual entry for depreciation will be made. The nominal accounts will naturally be closed into the manufacturing account at the end of the fiscal period to show the machine-cost of production for that period. During the third or fourth year, when maintenance becomes more than the first year, the difference will be closed into the Reserve for Maintenance of Machinery account. The entry for repairs to machinery will be a debit to Reserve for Repair to Machinery account, and a credit to Cash account. The same entry will be made in the case of replacement and betterment.

Illustration of the memoranda accounts and the journal entries:

Machine No. 1 Maintenance	*Machine No. 1 Repairs*
5000	4000
Machine No. 1 Replacement	*Machine No. 1 Betterment*
4000	2800

Journal entries at the end of the first year:

Maintenance for Machine No. 1	1000	
Cash		750
Reserve for Maintenance Machine No. 1		250
Repairs for Machine No. 1	1000	
Reserve for Repairs to Machine No. 1		1000
Replacement Machine No. 1	800	
Reserve for Replacement Machine No. 1		800
Betterment Machine No. 1	560	
Reserve for Betterment Machine No. 1		560

Posting these entries to the proper accounts, we have the following ledger records:

Machine No. 1 Maintenance		*Reserve for Maintenance Machine No. 1*
Cash	750	250
Reserve	250	
	1000	

Replacement to Machine No. 1	*Reserve for Replacement Machine No. 1*
800	800

Repairs to Machine No. 1	*Reserve for Repairs Machine No. 1*
1000	1000

Betterment to Machine No. 1	*Reserve for Betterment Machine No. 1*
560	560

The nominal account will be closed into the manufacturing account, and only the reserve accounts will remain open. The total expense will make the cost per unit of production .21 plus.

The second year there may not be any need for adjustments of the maintenance account.

There will probably be a $500 outlay on repairs. The entries when the repair is made will be:

Reserve for Repair to Machine No. 1	500	
Cash		500

The other journal entries are the same as last year. The cost per unit of production per year will also be the same.

The entries in the fourth year will be as follows:

Maintenance Machine No. 1	300	
Reserve for Maintenance Machine No. 1		300
Repairs to Machine No. 1	800	
Reserve for Repairs to Machine No. 1		800
Replacement to Machine No. 1	800	
Reserve for Replacement to Machine No. 1		800
Betterment to Machine No. 1	560	
Reserve for Betterment to Machine No. 1		560
Reserve for Repairs to Machine No. 1	900	
Cash		900

The entries for the fifth year are simple, and need no illustration.

The advantages this practice has over the old method are:

1. All the expenses of the machine will be borne by the product of the machine only.

2. Each unit of product produced by the machine during its life will bear an equal part of the expenditures of the machine.

3. A correct standard of cost of production can be established for every machine used in the factory, which standard can be used in the budgeting system.

4. Cost of idle time during years of depression will be borne by the entire production of the machine.

5. Goods produced during the year of depression will not be considered more expensive than goods produced during the years of prosperity.

In order, however, to obtain the full advantages of the budget for machinery, it is necessary to set up a budget for sales for the same number of years as the length of the life of the machines; the machine budget made up on the basis of the number of years the machine will produce is useless without knowledge of the demand for the product produced. Suppose we find that the machine can produce 1,000,000 units in the five years of its life. The question then is whether we shall be able to sell these units in five years. The demand may not be great enough to justify such extensive porduction. We shall then have a machine on our hands whose possibilities are far greater than our needs, and whose expenses are larger than we can afford. We can gain this knowledge only after we have made a study of the sales quota. Only then shall we be in a position to decide whether our present facilities are too large or too small for our anticipated business.

In order to find our sales quota for the next five years, it will be necessary to make use of the secular trend and the cyclical variation formula.* This, however, is no easy task because of the unknown factors which must be taken into consideration in determining the yearly changes in sales.

First, there is the problematic character of the economic cycle. The length of time a cycle lasts is not known. In fact, it varies in time and intensity from period to period. Sometimes the cycle—from trough to

* See Accounting Review, September, 1929, in which the author discusses the secular trend and cyclical variation formulas and their application in preparing a sales budget for one year.

trough—lasts as many as five years and sometimes more or less. Then again the duration of each phase in the cycle is also an unknown factor: no one has yet been able to foretell the length of the prosperity period, the declining period, the depression period, and the improvement period in the cycle. In the third place, the intensity of the phases within the cycle differ as between cycles and is not subject to intelligent prophecy.

However, an approximation of the business cycle and business condition may be made in spite of these difficulties by an assiduous interpretation of the previously mentioned secular trend and cyclical variation.

The budgeting of the sales quota for the length of the life of the machine can be used in turn as a check on the machine budget. By comparing the productive capacity of the machines with the demands of the sales department, it can be decided whether the present machines are sufficient to provide this demand, or new machines must be bought to satisfy the demand of sales. Again, it might happen at some time that the demands of one year are greater than our machines can produce. If the study indicates, however, that prosperity is temporary and that a period of depression may be expected in the near future, it will not be wise to invest in more machinery.

An important factor in buying new machines is the time of purchase. If the chart shows that more machines will be needed, it is good business to buy new machines and make necessary improvements on the plant during the year of depression, since during that time material and money are less expensive, and labor is both less expensive and more efficient. In addition, the plant will not suffer so much from enforced idleness during the installation.

A program to keep new machinery and efficiency devices from factories is not likely to be accepted by manufacturers and employers who are interested in efficiency and profit. It is really a move against progress to restrain new inventions. No one would want to stop the advance of science or put an end to improvement in machinery. Such a policy would allow competitors to get the advantage in the production of goods. For, while we hold out against improvement and new labor saving devices, competitors in other countries may be actively engaged in the installation of more advanced equipment by which they can undersell us in every foreign market.

A better solution to this problem is to introduce the new machines wherever they will prove more efficient, but to keep an eye continually on the market, seeing to it that production increases in the same ratio as sales. This can be accomplished by paying the worker a higher wage and by employing him only a few days a week. His salary should enable him to maintain the present standard of living. This would provide work for more men, and idle machine time would be decreased.

THE DEDUCTIBILITY OF CONTRIBUTIONS AS BUSINESS EXPENSES

EDWARD J. FILBEY

THE various revenue acts of the United States have neither included nor excluded charitable and similar contributions by corporations as deductible items. The Commissioner and the courts have ruled that they are not deductible. But the laws have made the ordinary and necessary expenses of conducting a business, deductible, and among these expenses the Commissioner, the courts, and the Board of Tax Appeals have included certain contributions by corporations that appeared to have been made with the expectation that direct and immediate benefits would accrue to the corporations as a result of the contributions.

In this article, the writer will attempt to show (1) that donations of this character have been treated with great inconsistency by the Commissioner, the courts, and the Board of Tax Appeals; (2) that the Commissioner especially has ruled against many such payments that ought to have been allowed as deductions; and (3) that, except for certain gifts clearly made in a spirit of philanthropy, it is impossible to prove that expenditures made by a corporation have been made for any other reason than that the directors or officers of the corporation have believed that benefits would flow to the corporation in consequence; and that, therefore, the wisdom of the corporation's directors or officers in making the contribution should not be subjected to question. On the third point it may be suggested here that, logically, contributions divide themselves into two classes, namely, philanthropic and business. The representatives of the Government have attempted to set up what is practically an intermediate third class, namely, contributions that are not made from motives of charity, but are made for purposes so vague that little or no benefit could reasonably have been expected from the gifts. The writer holds that there is no such middle ground; but that if a contribution is not made from motives of charity, it is made because the representatives of the corporation have believed that benefit would accrue to the corporation in consequence of the expenditure. If this is true, the expenditure is properly to be claimed as a deductible business expense, on the same basis as an advertising campaign or similar project regularly allowed as a deduction; and the Bureau is not justified in attempting to pass upon the wisdom or the unwisdom of the contribution on the basis of the probability or the improbability of immediate financial returns therefrom.

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As has already been indicated, although the income tax laws have not specifically excluded contributions by corporations, the Commissioner has from the first assumed that since charitable and similar contributions are made allowable deductions by the law in the case of an individual (1928 Act, Sec. 23, n), and are not stated in the law to be deductible in the case of corporations, they are not deductible by the latter; and he has therefore ruled definitely that they are not (Reg. 74, Art. 262). This is in accordance with an opinion of Attorney-General Palmer rendered May 19, 1919, based on the Act of 1918 (31 Op. Atty. Gen. 617).

Several court decisions have supported this view; e.g., in Baldwin Locomotive Works v. McCoach (215 Fed. 967), Dickinson, Judge, ruled that charitable gifts by corporations were not proper deductions under the 1909 law because the law did not include them among the permitted deductions.

But in Section 23 (a) of the 1928 Act (as well as in the preceding laws, with little variation) this provision occurs:

> In computing net income there shall be allowed as deductions: All the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business. . . .

On this the Commissioner comments as follows:

> Business expenses deductible from gross income include the ordinary and necessary expenditures directly connected with or pertaining to the taxpayer's trade or business. . . . (Reg. 74, Art. 121).

And later (in Art. 262) he says (and notice the further restrictions which he adds):

> Donations which legitimately represent a consideration for a benefit flowing directly to a corporation, as an incident of its business, are allowable deductions from gross income. For example, a street railway corporation may donate a sum of money to an organization intending to hold a convention in the city in which it operates, with the reasonable expectation that the holding of such convention will augment its income through a greater number of people's using the cars. Sums of money expended for lobbying purposes, the promotion or defeat of legislation, the exploitation of propaganda, including advertising other than trade advertising, and contributions for campaign expenses, are not deductible from gross income. (Reg. 74, Art. 262).

The last sentence quoted from the Regulations appears to have no basis of authority in the Revenue Act. The Commissioner is given explicit authority in the case of contributions by individuals to prescribe rules according to which contributions shall or shall not be deemed allowable as deductions; (Sec. 23, [n]) but he is given no such explicit authority in the case of business expenses (Sec. 23, [a]).

The attitude of the Commissioner is further illustrated by his rulings in a few specific cases:

The Corning Glass Works had planned to add to its own dispensary facilities, but as the city needed an addition to the public hospital at that time, the company was induced to contribute $25,000 to the latter enterprise instead of adding to its own equipment. The Commissioner disallowed the contribution as a deduction, saying:

> Donations which legitimately represent a consideration for a benefit flowing directly to the corporation as an incident of its business are deductible.
>
> Inasmuch as the employees of the M Company (the Corning Glass Company) will be required to pay the same rates for hospital treatment as are paid by other patients of the hospital, and in view of the fact that the hospital will be available to the general public, it is held that the benefit accruing to the corporation as a result of its contributions to the fund used for the construction of the hospital is not of such a direct nature as to constitute an allowable deduction as an ordinary and necessary business expense paid or incurred in the maintenance and operation of the corporations' business. (C.B. III 1, 293; I.T. 1980; III 16, 1509; Art. 562).

The case was appealed to the Board of Tax Appeals, which upheld the Commissioner (9 B.T.A. 771). But the taxpayer appealed to the courts, and was successful. The court held that the donation was "reasonably incidental to the carrying on of the company's business for the company's benefit" and should therefore be allowed as a deduction (App. D.C., 37 F (2d) 798, 801).

In a case in which the Commissioner had refused to allow a contribution by a corporation to a chamber of commerce for the purpose of securing lower freight rates, Mr. A. W. Gregg, General Counsel of the Bureau, offered the following opinion:

> If a number of shippers should combine their efforts to secure freight rates more beneficial to themselves, an individual contribution to a common fund to carry on the joint undertaking might properly be regarded as a business expense of any one of the shippers, and the situation would appear to be little different whether a particular attorney, traffic bureau, or an association such as a chamber of commerce carried on the work of securing

a revision of the freight rates. . . . It is accordingly recommended that Office Decision 2290 be revoked.

The recommendation was followed by the Commissioner, and the previous decision revoked immediately.

But contributions made to a chamber of commerce toward a development fund for industrial and publicity purposes were disallowed by the Commissioner, who, after referring to the revised decision just mentioned, said:

The business expenses which are deductible under the sections of the statute above referred to (Secs. 214 (a) 1 and 234 (a) 1 of the Rev. Act of 1926) are those incurred directly in the maintenance and operation of the taxpayer's business and not those expenses which may be beneficial or even necessary in a broader sense. That likewise is the effect of Article 562 of Regulations 69. . . . The benefits flowing to the subscribers of the fund raised and expended by the chamber of commerce of the city of R are most general and indirect, and cannot be said to have a direct or immediate relationship to any particular subscriber's business. The contributions of a subscriber do not represent a consideration for a benefit flowing directly to the contributor as an incident of his business (C.B. V-2, 188; V-47, 2980; I.T. 2814).

It is to be noted that the Commissioner is here basing his decision not directly upon the law but upon his own interpretation of it as expressed in the Regulations, and that he admittedly is arguing for a narrow rather than a reasonable application of the law.

II

There are next submitted extracts from a few of the great number of decisions of the Board of Tax Appeals on cases of this general character that have been brought before it.

Appeal of Poinsett Mills (1 B.T.A. 6): In 1920 the corporation contributed $1,006.49 to a Baptist church for the purpose of repairing and enlarging the church building. The deduction was disallowed by the Commissioner, but was allowed by the Board. In its opinion the Board said, in part:

It is the contention of the Commissioner that a corporation may be allowed a deduction under section 234 (a) (1) of the Revenue Act of 1918 only when the amount claimed is an "ordinary and necessary" expense of "carrying on" its business. Insistence is made (by the Commissioner) for a very limited interpretation of the phrase "ordinary and necessary" and of the words composing the phrase. . . .

The general acceptance of welfare work among employees . . . as a means of reducing labor turnover and eliminating industrial strife, is something of which this Board must take judicial notice. We believe that the Federal Government should be the last to fail to recognize the . . . value of welfare and social work among industrial organizations and that it should do everything to encourage the betterment and contentment of those who labor in industrial communities, such as the mill village of the taxpayer.

It is our opinion that a contribution made under the conditions presented by the testimony in this particular case is one which may well be considered an "ordinary and necessary" expense of the particular business of the taxpayer. The contribution was clearly made by the corporation for purposes connected with the operation of its business and legitimately represents a consideration for a benefit flowing directly to the corporation as an incident to its business.

It is to be noted that the Commissioner acquiesced in the decision of the Board in this case.

Among other decisions of the Board favorable to the taxpayer are the following:

A donation to a public school district to assist in the erection and equipment of an adequate school building was allowed. About 90 per cent of the children attending this school were children of the employees of the donor corporation (Holt-Granite Mills Co., 1 B.T.A. 1246, decided May 26, 1925).

A gift by a land company to a fund for the establishment of a post of the United States Army upon a tract of land adjacent to land owned by the land company. The

taxpayer established the fact that its land sales increased thirty-fold as a result of the establishment of the post (Anniston City Land Co., 2 B.T.A. 526). But two contributions made under precisely similar circumstances were disallowed by the Board (4 B.T.A. 687 and 689, discussed below).

A contribution by a sugar corporation to a Y.M.C.A. located within the taxpayer's plantation to pay for the services of welfare workers among the company's employee's was allowed. Practically no other persons had access to the facilities of the Association (Lihue Plantation Co., Ltd., 2 B.T.A. 740, decided Sept. 30, 1925).

A gift by a bank to a county farm bureau for prizes to be awarded school children of the county was allowed,

> . . . the purpose of the bank being to advertise itself. Many of the prizes were initial deposits of $5 each. We are of the opinion that the contribution . . . was an ordinary and necessary expense of the taxpayer's business and should be allowed as a deduction. (Citizens Trust Co. of Utica, 2 B.T.A. 1239, decided Nov. 6, 1925).

A company manufacturing woolen yarns was allowed to deduct as a donation the amount spent in 1919 for advertising and promoting the sale of Liberty bonds in an advertisement which appeared over its corporate name. The Board said in its decision:

> A corporation of the character of the taxpayer is entitled to deduct amounts spent in advertising as a part of its ordinary and necessary business expense, and, as the particular form of advertising to be employed is, of necessity, within the judgment of the officers of such a corporation as the taxpayer, we believe that the Commissioner improperly disallowed the deduction. (B. F. Boyer Co., 4 B.T.A. 180, decided June 22, 1926).

It will be noted that this opinion is at variance with that of the Commissioner expressed in Regulations 262 to the effect that "advertising other than trade advertising is not deductible."

> A payment made by a corporation to another corporation organized and operated exclusively for the promotion of social welfare work among the employees and the families of the employees of the incorporators, for the advancement of the physical, mental, and moral interests of such employees and their families, and to assist them in sickness, disability, old age, and death, is an ordinary and necessary expense of the business of the petitioner. (Elm City Cotton Mills, 5 B.T.A. 309, decided Oct. 30, 1926).

It was held by the Board that a contribution of $6,002.10 in 1918 by a brewery corporation to the State Brewers Association constituted a proper business expense and that it should be allowed as a deduction (Calif. Brewing Assn., 5 B.T.A. 347, decided Oct. 30, 1926).

> Amounts paid into a fund during each year for pensioning its employees are deductible from gross income for the year as ordinary and necessary expenses of carrying on the petitioner's business, where the facts and circumstances connected with the creation and operation of the fund show that it is a trust and a separate taxable entity. (Hibbard, Spencer, Bartlett & Co., 5 B.T.A. 464, decided Nov. 12, 1926; followed also in Live Stock Natl. Bank, 7 B.T.A. 413, promulgated June 18, 1927).

Sums spent for dances and picnics for employees by a corporation operating a department store were allowed by the Board as deductions (Popular Dry Goods Co., 6 B.T.A. 78, decided Feb. 7, 1927).

Contributions by a corporation manufacturing hosiery, to the American Protective Tariff League and to The League of Industrial Rights were allowed as deductions by the Board on the ground that these expenditures were "directly connected with the business and properly to be considered as ordinary and necessary expense incident to the carrying on of a business" (Richmond Hosiery Mills, 6 B.T.A. 1247, decided May 4, 1927). Yet neither contribution could, of course, have been counted a definitely "necessary" expense.

A contribution by a mining corporation of $1,000 toward the rebuilding of a Methodist church which had burned down was

allowed as a deduction by the Board. The employees of the company constituted 75 to 90 per cent of the Methodist congregation. The Board said in its decision:

> If this contribution had a reasonable relation to petitioner's business, it is allowable as a business expense. . . . That it had such a relation cannot be doubted in view of the particular facts under which the contribution was made. In our opinion the contribution may well be considered as an ordinary and necessary business expense. (Superior Pocahontas Coal Co., 7 B.T.A. 380, promulgated June 16, 1927).

A contribution to a fund for bringing an Orangemen's Association Picnic to a certain park was allowed in the case of a corporation operating an amusement device at the park (9 B.T.A. 1203).

An Ohio corporation engaged in the wholesale liquor business was allowed as a deduction $12,500 expended in entertaining customers as a means of promoting sales. "The entertainment expenses included charges for hotel rooms, meals, theater tickets, articles of clothing, and numerous forms of entertainment, as well as an occasional cash payment in the amount of several hundred dollars" (The Adler Co., 10 B.T.A., 849, promulgated Feb. 17, 1928).

A brewing company was allowed Christmas gifts of cash as "additional compensation" to employees; also a payment to the Lager Beer Board of Trade as an ordinary and necessary expense (Geo. Ringler & Co., 10 B.T.A. 1134, promulgated March 1, 1928).

A hotel's contribution of $150 toward a fund for entertaining a fleet was judged deductible by the Board (Ranier Grand Co., 11 B.T.A. 520). The hotel company's business had doubled for certain days as a result of the coming of the fleet.

A contribution of $1,924.74 by a railroad company to the Association of Railway Executives "for the purpose of promoting railroad legislation" was allowed by the Board (Western Md. Ry. Co., 12 B.T.A. 889, promulgated June 27, 1928).

The Board allowed a contribution of $2,200 by a hotel company to a fund for bringing about the location of a United States Army Camp in its vicinity; but disallowed a contribution of $100 toward the building of better roads leading into the city (Hotel Patton Co., et al., 13 B.T.A., promulgated Oct. 12, 1928).

A contribution of $600 by a corporation to a fund collected by a chamber of commerce to put on a drive for the advertising of the state and to attract tourists to the state was allowed by the Board. The company was engaged in the manufacture and sale of men's wearing apparel, tents, etc. (Hirsch-Weis Mfg. Co., 14 B.T.A. 793, promulgated Dec. 18, 1928). The Board said: "The contribution was made for purposes connected with the operation of its business and represents a benefit flowing directly to it as an incident to its business."

Contributions by a brick company to a "Better American Association" and to an association for the purpose of encouraging the location of industries and residents were allowed by the Board, but a contribution to a citizens' fund for exercising surveillance over public works was disallowed as "indirect and remote" (Simons Brick Co., 14 B.T.A. 878, promulgated Dec. 21, 1928).

Contributions by a sugar company to a hospital were allowed. The Board said:

> We do not think the petitioner in making the expenditure made it in the rôle of the philanthropist, but rather as a business proposition wherein the expenditure represented a consideration for a benefit flowing directly to it and as an incident of its business. . . . One of the trends of modern business is represented by the expenditure. If the interests of the employees are safe guarded, both the employer and the employee benefit.

The city was largely a company city (Sugarland Industries, 15 B.T.A. 1265, promulgated April 5, 1929).

Of eighteen items of contributions claimed by a roofing company, five were allowed and thirteen disallowed. There was very little difference between the two

groups, all being more or less charitable. Testimony showed that in certain cases a direct benefit was anticipated. Actual benefits (i.e., orders) resulted from several organizations, gifts to which were not allowed (Western Elaterite Roofing Co., 19 B.T.A. 467, promulgated March 31, 1930).

Forty-six out of fifty-six items claimed as contributions by a corporation operating a department store were allowed as deductions by the board, although many of those allowed were charitable, and several were for tickets to concerts, etc. The Board said:

> In our opinion, neither the deduction of an item by a corporation nor its disallowance depends upon whether it is a donation. . . . Items which may colloquially be called donations, because perhaps the recipient is a charity, or the occasion is beneficent, or the transaction is not approached in a formal manner with express legal consideration, may still have such a business significance as to justify their outlay and their recognition as business expenses. When, by adequate evidence, they are shown to be such, they are deductible as any other ordinary and necessary expense; and when the evidence fails to establish this or shows in fact that the donations are not reasonably motivated by or related to the proper conduct of the business, the deduction must fail (Killian Co., 20 B.T.A. 80, promulgated June 16, 1930).

A contribution of $4,300 to a chamber of commerce to be used primarily for the securing of new enterprises for the city was allowed to a dry goods company. The chamber of commerce had issued additional memberships to the corporation for the additional payments over $720, the ordinary dues (Emery-Bird-Thayer Dry Goods Co., 20 B.T.A. 796, promulgated Sept. 12, 1930).

A contribution of $400 by a power and light corporation to an endowment fund of a college was allowed by the Board, which said:

> The contribution, minor in amount when compared with the results acomplished, had for its purpose the continuation of the college as an institution sufficiently endowed to attract students to the city and sufficiently able to purchase the petitioner's product. (Yamhill Electric Co., 20 B.T.A. 1232, promulgated Oct. 10, 1930).

One of the most favorable of the recent decisions of the Board was promulgated in the case of S. C. Toof & Company, on December 29, 1930 (21 B.T.A. 916). The Commissioner had disallowed seven gifts to a college and to various hospitals, etc. All contributions except one were allowed by the Board. The opinion stated that the evidence "shows that the amounts expended were so directly related to the petitioner's business as to warrant their deduction from gross income as ordinary and necessary business expenses." Yet the evidence consisted of little more than a presentation of the fact that the donees had been and were still good customers of the petitioner.

The Board reversed the action of the Commissioner in disallowing the deduction of contributions by the Missouri Pacific Railroad Company to a Young Men's Christian Association furnishing eating and rooming facilities and social and recreational activities to the taxpayer's employees (22 B.T.A. 267, promulgated Feb. 20, 1931).

The Board allowed contributions made by the Kansas City Southern Railway Company to certain railroad Young Men's Christian Associations, to the Priests of Pallas, and to the Association of Railway Executives; but disallowed gifts to annual firemen's and policemen's balls, and to a regimental armory (22 B.T.A. 949, promulgated March 30, 1931). Likewise, gifts by the Chicago & Northwestern Railway Company to the two above-named organizations and to the Travelers' Aid Society were allowed as deductions by the Board (22 B.T.A. 1407, promulgated April 30, 1931).

A few of the many unfavorable decisions of the Board of Tax Appeals are presented:

A contribution to a fund collected for the purpose of repairing and reconstruct-

ing certain roads between Cincinnati and Louisville, Kentucky, were disallowed. These roads were used to a considerable extent by the salesmen and other employees of the taxpayer corporation, a wholesale dealer in millinery, with its principal office in Louisville. "The evidence before the Board does not clearly show that any benefit flowed directly to the taxpayer from the making of the contributions" (David Baird & Son, Inc., 2 B.T.A. 901, promulgated Oct. 19, 1925). The benefit should have been self-evident.

A gift of $1,000 by a paper manufacturing company toward the establishment of a hospital in the village in which its principal plant was located was disallowed (Carso Paper Co., 3 B.T.A. 28, promulgated Nov. 12, 1925).

A gift of $250 by a wholesale fruit and produce business corporation toward a fund for the purchase of an army camp site at Anniston, Alabama, already mentioned, was disallowed in spite of the fact that the business of the taxpayer had increased fourfold during 1918 over previous years. Four members of the Board dissented (Bell-Rogers & Zemurray Brothers Co., 4 B.T.A. 687, decided Aug. 2, 1926).

A gift of $500 by a corporation engaged in the retail sale of automobiles, etc., toward the purchase of the same camp site was likewise disallowed, on the ground that "the contribution was not an ordinary and necessary expense of carrying on the taxpayer's trade or business." Yet the taxpayer had shown that its business had been benefited greatly by the location of the camp in the vicinity, as had been contemplated when the donation was decided upon (Anniston Auto Co., 4 B.T.A. 689, decided Aug. 2, 1926).

It should be noted that in the last two cases the points at issue were identical with those in the case of the Anniston City Land Co. (2 B.T.A. 526), which was decided in favor of the taxpayer.

The general attitude of the Board as to the discretion granted the Commissioner by Congress is indicated in the next case. A contribution by a spinning company toward the maintenance of a baseball team in the mill village in which the company's plant was located was disallowed by the Board. The Board said, in part:

> There can be no proper question that the management of the corporation must be allowed a considerable latitude for the exercise of judgment as to what constituted ordinary and necessary expenses. On the other hand, we believe it must be conceded that in the administration of the income-tax laws, Congress intended that the administrative officer should have the power and authority to scrutinize claims for deductions from gross income to the end that the exercise of prudent business judgment on the part of corporate officers might not be abused to the extent of unreasonably reducing the amount of gains and profits which should be subject to the income tax. . . . In several cases already passed upon by the Board we have allowed deductions . . . for purposes not wholly connected with the operation of the business, and in discussing those cases we have seemingly adopted the rule that there is no hard and fast line between expense items which may be deducted and those which may not be deducted, and it has become a settled rule of the Board that each case of this character must stand upon its own individual merits. (Climax Spinning Co., 8 B.T.A. 970, promulgated Oct. 24, 1927; so in effect, Natl. Yarn Mills, 10 B.T.A. 1102, promulgated Feb. 29, 1928; and Majestic Mfg. Co., 11 B.T.A. 37, promulgated March 16, 1928).

As to the point made by the Board relative to "unreasonably reducing the amount of gains subject to the tax," it will, of course, be plain that the tax saved can never be equal to the amount expended for any purpose whatever; and that an expenditure would therefore not have been incurred had the officers of the corporation not believed that it would be justified by the results obtained.

The Board disallowed a contribution of $500 toward procuring the extension of a railroad to the city in which the donor corporation operated a cotton warehouse (Planters Warehouse Co., 8 B.T.A., promulgated Oct. 31, 1927).

An individual engaged in the coal busi-

ness was denied the deduction of $1,111.60 contributed to a chamber of commerce for the purchase of land to be used by the United States Government for coal storage and a coal tipple (Samuel Zimmern, 9 B.T.A. 1382, promulgated Jan. 17, 1928).

A contribution of $360,000 by a rolling mill to a civic fund (60 per cent of the total raised by industries of the city) for various welfare purposes was disallowed by the Board on the ground that the benefit was too indirect (American Rolling Mill Co., 14 B.T.A. 529, promulgated Dec. 4, 1928). The company had from the beginning done an exceptional amount of welfare work among its employees and for the twenty-one years of its existence had never had a strike. The president of the company was the instigator of the plan to raise the $1,000,000 fund for various co-operative enterprises. The Board said (page 537):

> While the contributions may have been business expenses in a business and accounting sense, it is our opinion that they do not fall within the classification "ordinary and necessary expenses" as that phrase is used in section 234 of the Revenue Act of 1918.

But the company carried the case to the courts and obtained a favorable verdict (American Rolling Mills Co. v. Comr., 41 Fed. [2d] 314). The court said:

> The question always is whether, balancing the outlay against the benefits to be reasonably expected, the business interest of the taxpayer will be advanced. . . . All of the projects to which this fund was devoted, with the exception of the city commission and the contingent fund, were needed for social, educational, and recreational purposes. They are projects which in modern times are necessities in a community, and they could only be had in this community by the petitioner's paying for them or joining others in doing so. If under this necessity it had constructed the necessary buildings for its own employees on its own property, we do not doubt that the cost thereof would be regarded as ordinary business expense. We can see no difference between that character of expenditure and contributions to community institutions from which the employees would derive the same benefits.

The Board denied the deduction of large gifts to a college and to a hospital and to a fund for improved highways, not because they were donations but because the good-will and the good roads resulting would be of "lasting benefit," and therefore (presumably) were in the nature of capital charges (Killian Co., 20 B.T.A. 80, promulgated June 16, 1930).

III

From the foregoing cases it appears evident that the Board of Tax Appeals has usually been more generous to the taxpayer than has the Commissioner. It is the writer's opinion that the courts likewise have been more ready to admit the reasonableness of a deduction claimed than has the Commissioner, and as has been shown, more ready in some instances than has the Board of Tax Appeals.

But the writer contends that greater fairness would result if no attempt were made to separate contributions made admittedly for business purposes into two groups, those deductible and those not, particularly when the distinction is based upon the immediateness of the results obtained from the contributions.

The ultimate effect of a contribution is frequently greater than the immediate effect. Thus if the street railway company in the case cited in the Regulations (262, *supra*) had given the same sum of money toward bringing an industry, instead of a convention, to its city, the company would derive revenue from the employees of the new industry and their families, not for a single day, but as long as the industry remained or as long as the street car company's cars or buses continued to operate. Yet the Commissioner admits that the single day's prospective benefit would justify the deduction of the contribution; while his decisions in practically all cases where the permanent benefit arising from the coming of a new industry has been in-

volved justify us in concluding that the street car company's donation toward bringing in the new industry would be disallowed as a deduction. The same reasoning applies, of course, to all the business houses that join in bringing an industry, along with its employees, to a city. For as a result there will be increased sales of all the necessaries of life—food, clothing, medicine, shoes, furniture—and many of the luxuries, such as radios, and automobiles.

An advertisement of a special sale by a well-established business concern frequently brings a considerable part of the population of a neighboring village to the city where the sale is to be held. If the cost of this advertisement is a justifiable expense of the business house, when the sale lasts for a single day and the merchandise is sold at a reduced price, how much more would a contribution be justified that would help to bring what is actually a small community to the city permanently, along with a new industry—a community whose buying power would be a daily source of revenue to the business establishment, for years, and whose purchases would be made at the regular prices of the merchandise, instead of at the special prices offered for a single day!

Finally, the writer reiterates his contention that contributions are made by business men either from motives of philanthropy or because they believe that certain benefits will accrue therefrom to their business. In the case of the individual contributor, both types of contributions should be allowed as deductions. In the case of the corporation, the second type should properly be allowed in practically all cases, inasmuch as the judgment of the corporation's officials as to the benefits likely to be secured is presumed to be as reliable as that of the Commissioner or his agents.

THE CONCEPT OF EARNED SURPLUS

E. L. Kohler

In recounting the history of the definition of an accounting term nearly six years in the making, I am of the opinion that of greater importance than the words of which the definition is composed are the practical applications to which it is intended that the word defined be put. I also believe that the general course of the reasoning which led to the final definition will prove to be of even greater interest than the expected applications of the definition.

The Committee on the Definition of Earned Surplus, reappointed hopefully each year by the President of the American Institute of Accountants, faced a task of no mean proportions. First was the obstacle that many common terms in use in the world of business, especially terms appearing on financial statements, have no fixed meaning, and can be made intelligible only through the aid of explanatory phrases. Second was the apathy, if not the actual resistance of business itself, toward more exact usages. The astonishing growth of interrelations between business enterprises has prevented the precise formulation of the scientific truths that are presumed to underlie the various manifestations of economic endeavor. Third was the multiplicity of state laws and court decisions bearing on the questions of dividends and maintenance of capital. It was said by several accountants whose opinions on the matter were solicited that surplus and earned surplus are purely legal concepts; if we are to believe these practitioners there are, in the United States, not less than forty-eight varieties.

To meet the first difficulty it was decided that if a definition of earned surplus was to be essayed, its family relationships must be established. How far back should the family ties be examined? Only to its brothers and sisters in surplus, since net worth or proprietorship equity as a whole has a more or less commonly accepted meaning. Consequently, under the title of "Collateral Definitions," an attempt was made to describe the remaining elements of net worth so that earned surplus might be differentiated therefrom more clearly.

As to the reluctance of business to set its boundaries, the great interest nevertheless displayed by the majority of accountants in the activities of the Committee seemed to indicate that a start on definitions was needed. Perhaps accountants feel that business activities can be measured, notwithstanding constantly changing business conditions. Perhaps they see the necessity of standardization for the information and protection of the stockholder. At any rate, many accountants appear to be willing to adopt the definition despite the fact they may formerly have taken exception to certain points which the definition now contains. This attitude gave strength to the Committee's belief that if accountancy deserves the ranking of a scientific pursuit, its postulates must be carefully formulated and, if need be, changed from time to time.

Laws governing business, enacted by the various states, and court decisions which have created precedents were hard to disregard. Yet if accountancy is to be an independent and dispassionate force in the business world it must learn to stand, unsupported, on its own feet. If it will do so, the law will look to accountancy to set the financial standards for the business world to follow. Indeed, as the author and enforcer of business ethics—perhaps also of business law—the accountant has a most important future.

To define earned surplus as undistributed net profit seems simple enough; but the definition of net profits both positively and negatively, and the preferred treat-

ment of net profits after their accumulation, demanded a thorough sounding of the professional temper and a careful weighting of a good many controversial points.

II

Probably no one today objects to the grouping of capital stock and surplus under the single heading of net worth. Yet it was not many years ago that tradition demanded the stating of capital stock as the first liability on the balance sheet and surplus as the last. It was said that capital stock was the most important of the liabilities and represented an investment in the fixed assets which, again traditionally, appeared first on the assets side. Surplus, on the other hand, was not only the excess of assets over liabilities, but was reflected for the most part in current assets which commonly wound up the property side of the balance sheet.

Tradition changed. Working capital now demands a greater emphasis on the balance sheet, while capital stock and surplus are no longer regarded as being primarily invested in separate groups of assets. The classification of liabilities by equities now finds universal acceptation.

It has been urged that where the capital stock of a corporation has no par value, the distinctions between capital stock and the various sorts of surplus have become lost and that net worth should be displayed, for balance sheet purposes at any rate, as a single figure. The argument gains plausibility in those instances in which additional shares of no-par stock are sold after surplus has accumulated, and after an enhancement in the share valuation has occurred because of such accumulation. Should not all surplus be transferred to capital stock account upon the sale of a substantial block of no-par-common shares? The answer is not difficult. The selling price of the new shares depends not so much on the size of surplus as on the proven ability of the company to pay dividends. In smaller corporations where there may indeed be a closer connection between the values contributed in exchange for new shares and the book value of shares previously outstanding, there is some doubt whether the old shareholders will view with favor the conversion of an account containing future dividend-paying possibilities into an account which can be realized, if at all, only upon the liquidation of the company.

The separation of the contributions of new shareholders into a stated value for that block of stock and paid-in surplus against which dividends may be charged has been resorted to in not a few instances. Again the stockholders have good cause to object (in this instance, the new stockhold ers) because of the unconservative possibility of paying back to them as dividends a portion of their contributions.

But the strongest argument against the attempt to put the old and new no-par shareholders on an equal footing with respect to capital stock and surplus is that little is gained by so doing. In the ordinary case, dividends probably will not be paid out of surplus existing prior to the sale of a substantial number of new shares, and it would be condemned universally as unsound corporate practice to pay dividends to either old or new shareholders from the proceeds arising from the sale ot new shares. So, at least, the membership of this association expressed itself in the earned surplus questionnaire[1] sent out two years ago, in the ratio of 103 to 1.

This same questionnaire revealed that the great majority of accountants favor the separation of contributions of stockholders from surplus and the separation of capital surplus from surplus arising from earnings. No argument was presented which would justify any other procedure, exception being made, of course, to the reduction, under proper conditions, of an operating deficit by the decrease of par or stated values.

The Committee's efforts, therefore, were divided, as to subject matter, between:

[1] See Appendix B.

1. A general description of forms of surplus other than earned, and the inclusions and exclusions thereunder;

2. A comprehensive examination of the concept of earned surplus and profits; and

3. The display of surplus accounts on financial statements.

In general, the effort was made to induce the profession to make the clearest possible presentation of surplus accounts and to encourage a strict adherence to certain minimum practices without which it was believed the accountant would fall short in his duties to his client and the public.

III

"Capital surplus" was selected as the general term to cover revaluation surplus and the various forms of paid-in surplus. As a balance-sheet title its use was condemned for the reason that the substitution of the names of its components is always to be preferred. As a generic term its use should be valuable, however, if for no other reason than that it affords a good substitute for the phrase "surplus other than earned." One of our members raised strenuous objections to the inclusion of revaluation surplus under the heading of capital surplus because of the proposition, held by him and possibly by many others, that revaluation surplus is a mere valuation account in the same sense as is a reserve for depreciation, and that it is placed, by courtesy only, in the net worth section of the balance sheet, because of its eventual realization as earned surplus. The Committee developed a different concept of revaluation surplus and recognized its close relation, under this concept, to undisputed forms of capital surplus.

Paid-in surplus is generally looked upon as arising from:

1. The excess of values received, in the sale of stock, over par or stated values;

2. The excess of par or stated values over the cost of stock retired;

3. Gains, less losses, from the sale of reacquired stock;

4. Assessments against stockholders; and

5. Donations by stockholders or others.

Profits from the sale of reacquired or treasury stock are, according to a number of accountants, including a few members of this association, a proper addition to earned surplus. Yet the great majority favor that treatment only if the profit is small. If substantial, the same objection would arise as was noted in a preceding paragraph under the sale, in the first instance of additional block of no-par common stock where a portion of the stockholder's contribution is credited to surplus. There is, too, a moral issue at stake, namely, shall a corporation, notwithstanding liberal statutes, deal in its own stock? This consideration doubtless influenced many answers to the questionnaire, in spite of the oft-repeated assertion that an accountant deals with facts, not issues.

Donated surplus as a variety of paid-in surplus may occasion some surprise. When it is remembered, however, that most forms of donated surplus come from stockholders and that the recommendation is made that the various sorts of paid-in surplus be described on financial statements, it will be realized that paid-in surplus becomes a convenient term to designate the family sub-genus of items which may be found under that head. Perhaps the inclusion of, say, a donated factory site under the heading of paid-in surplus may be most seriously questioned. However, a factory site donated by a chamber of commerce is never contributed as a source from which dividends may be paid; rather is it not actually a contribution made in lieu of calling upon the assets representing the equity of stockholders, and, therefore, a contribution made on behalf of stockholders? For income tax purposes such donations have been held to constitute taxable income to the corporation in the year of the donation; would it not be more logical to regard them as investments made for the stockholders and, therefore, taxable income to the stockholders? In my opinion, yes.

IV

In building up the concept of earned surplus proper, the question of net profits had to be met. So far as is known the Committee has attempted for the first time to indicate the sources of corporate profits. The Committee reported as follows:

> Profits . . . arise from transactions resulting in the acquisition of cash or of property which at the time of its receipt may ordinarily be classified as, or converted into, a current asset; or from transactions in which the consideration received includes the complete or partial discharge of a liability.[2]

Net profit then, is the residuum of profits after their decrease by expenses and losses arising during the period in which the profits have been made. The problem of expense and loss allocation can scarcely be reduced to a definition and will be omitted here. But in endeavoring to point out the effects on the balance sheet of profit transactions, it is hoped that future attention may be centered in the recognition that must be accorded the types of assets, changes in the valuation of which are to be termed profits. Perhaps the limitations imposed by the Committee may ultimately be regarded as too narrow; for the time being they would appear to reflect the present conservatism in accounting practice, at least that evidenced by the questionnaires above referred to.

Under the described sources of profits, are profits reflected in instalment receivables properly a part of earned surplus? Yes, provided the receivables can be regarded as a current asset. In all ordinary cases instalment accounts can be so regarded, for the reason that they may be converted into more liquid form should the demands on working capital so require. This basis would not recognize profits in the exchange of capital assets, nor in the sale of any asset in return for unmarketable paper. While the principle involved leads to difficulties in the interpretation of certain transactions, it is hoped nevertheless that a discussion of the source of profits as defined will lead to a more definite conclusion as to the nature and recognition of profits in general.

Another hoped-for topic of discussion is the indicated inclusion in profits of the uncompensated-for discharge of a liability. Transactions of this nature are not frequent, but they have been raised in the courts. The underlying principle is of a sufficiently theoretical character to deserve a careful formulation.

As finally phrased the earned-surplus definition is as follows:

> Earned surplus is the balance of the net profits, net income, and gains of a corporation after deducting losses and after deducting distributions to stockholders and transfers to capital stock accounts.

"Net income" refers to financial and other enterprises not engaged in merchandising pursuits where the term "net profit" is not employed. "Gains" and "losses" are intended to cover surplus credits and debits which some accountants choose to omit from the statement of profit and loss. At this point, a digression from the subject in hand may be pardoned. Some of our text-writers have developed the concept of "extraneous" profits[3] and losses, for somewhat the same reason perhaps that practitioners have employed the term "non-recurring charges." While the latter may be properly (and all too often improperly) applied to a recasting of net profits under a proposed plan of refinancing, the practice of carrying profits and losses direct to surplus is never justified and should be abandoned.

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[2] The definition is reproduced in full in Appendix A.

[3] Generally this term is interpreted as the profit of a merchandising corporation arising through non-merchandising transactions. To say "the extraneous profits of a corporation" is to misname the gains from the miscellaneous activities in which a corporation must of necessity engage.

V

I come now, not without some fear of the consequences, to the moot question of appreciation. We have been afflicted so frequently in recent years with broadsides from the appraisal companies urging the adoption of reproduction cost of fixed assets as the basis for balance-sheet valuation, and with court decisions in which the idea of property has become hopelessly confused with cost of reproduction and cost of reproduction and replacement with present values, that it is no wonder the members of our Association and of the Institute have expressed themselves as favoring almost any consistent theory of fixed asset valuation and depreciation.

When the first report of the Committee made its appearance a year ago, it contained a statement to the effect that if appreciation were expressed on the balance sheet, the credit half of the transaction should be treated as neither unrealized nor realized appreciation but rather as "revaluation surplus," to be permanently maintained as such. That is to say, if appreciation is regarded by the management as being sufficiently real as to warrant an increase in the balance-sheet valuation of fixed assets, the act of creating the additional value is closely analogous to the permanent capitalization through a stock dividend of any form of surplus or to a process of recapitalization whereby surplus becomes forever merged with the statutory liability to investors. The write-up is simply a recognition of an advance in the price-level of the fixed assets with which the business operates. If the fixed assets are to be replaced at a price less than cost, no good reason appears for the expression of appreciation. Many of the proponents of the appreciation idea confuse the requirements of a financial statement with the process of price-setting and become inextricably entangled.

Let it be said that the so-called true cost of the services performed by fixed assets is only one of a number of costs which may differ from the money value of such costs reflected on books of account and in financial statements. Under any system of accounting thus far conceived, these true costs are not yielded, although in the average case ordinary accounting procedure produces satisfactorily close results. And what is perhaps worse, cost of replacement or the present value of the fixed-asset service is not obtained through costs of reproduction. Yet it is cost of reproduction, without, in most instances, allowances for obsolescence and inadequacy that are put, where appreciation is expressed at all, on the balance sheets of American enterprises. The distortion that results is without question misleading to the average observer and, excepting the appraisal companies, can satisfy no one.

Until something more can be learned by bankers and business executives about price-levels and costs of services, it seems futile to attempt to give expression to costs of reproduction as a measure of present investment. One might even go further and question whether the values furnished by appraisers are even costs of reproduction, but such an inquiry is unnecessary here.

Yet where costs of reproduction have been expressed on financial statements, what else can be done except to assume that the corporate management is proclaiming to the world changes in price-levels which have been accepted as factors to be reckoned with in the future of the enterprise? Why do they not belong as much in statements of profits and loss as well as in balance sheets? The preparation of a balance sheet on one basis and a statement of profit and loss on another is an inconsistency of which accountants might well rid themselves in the shortest possible time.[4] Our textbooks have for the most part

[4] Castenholz, in his recent book, *A Solution to the Appreciation Problem*, advocates the charging to expense of depreciation on appreciation with a corresponding credit to earned surplus, the balance sheet, however, containing no appreciated figures. This procedure is the exact reverse of what the accountant so often encounters in practice, and is just as incongruous.

proceeded on the realized appreciation theory which originated under the war excess-profits-tax law. This law frankly recognized a basis for invested capital inconsistent with the basis to be used in ascertaining taxable income; and the realized-appreciation theory, at that time bridging the gap, has been inherited by us with the curious complaisance which has accompanied our adoption of other taxable income theories and confusing them with accounting procedure. The Committee finally yielded to this widespread practice of recognizing an annual realization of appreciation, but only in the instances where the practice had already been established. In new cases it is hoped that the profession will recognize the Committee's original recommendation, or, better, give expression to appraisal values only parenthetically.

VI

Earned surplus is conceived by the Committee as dating from the formation of an enterprise and not before. This means the date of incorporation, or in the case of subsidiary enterprises whose assets and liabilities are being included in a consolidated balance sheet, the date on which a controlling interest was acquired. Over this the members of our Association expressed no doubt, but the point lacks a clear exposition in our textbooks. Where a merger or consolidation has been effected without substantial change of beneficial interests—as, for example, through an exchange of stock—the real date of formation is the date the underlying enterprise or enterprises were established. Under these conditions the reorganization does not affect earned surplus unless a portion of the new stock issued is the equivalent of a stock dividend.

Dividends paid, according to the Committee's report, are presumed to come from earned surplus; coming from other sources the balance sheet must be qualified, at least at the end of the year in which the dividend is paid.

Other recommended balance-sheet practices are: (1) the disclosure of changes in earned surplus and other forms of surplus during the interim beginning with the last generally available report, a practice that might well be extended to all net-worth items; (2) a complete separation of capital stock from earned surplus and other forms of surplus as already noted herein; (3) a grouping under the general heading of earned surplus of the items of so-called appropriated surplus.[5] These recommendations are made solely in the interest of clarity and would seem definitely to increase the value of the balance sheet in the hands of every interested person.

In the final paragraph of its report the Committee has made the following statement:

> Occasions will arise where the practice as herein set forth cannot be strictly complied with, due to properly authorized corporate action under permissive statutes, or to agreements between a corporation and its bankers or investors. In these instances adequate disclosures must be made. A disclosure may be general or specific and it may be limited to the year of the transactions or continued, according to the relative amount and significance of the item.[6]

It would be a mistake to interpret this paragraph as vitiating in any way the positive statements contained in the paragraphs that precede it. It is simply a recognition of the difficulties surrounding the adoption of the report by practitioners. No definition of earned surplus, this or any other, can be accepted *in toto* by any practitioner or textbook author without some modification of his previous practices and beliefs. Definition-making in accounting is a ploughing of unbroken ground. Some traditional beliefs must of necessity be forever ploughed under.

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[5] The balance of earned surplus may be designated "Unappropriated."

[6] A disclosure, as used here, is a statement of fact or opinion added, as necessary information, to a balance sheet or other financial statement. In an auditor's certificate, disclosures become qualifications.

APPENDIX A

Definition of Earned Surplus

Earned surplus is the balance of the net profits, net income, and gains of a corporation after deducting losses and after deducting distributions to stockholders and transfers to capital-stock accounts.

Collateral Definitions

Surplus consists of capital surplus and earned surplus. Capital surplus comprises paid-in surplus and revaluation surplus, that is, all surplus other than earned surplus. Paid-in surplus is the amount received from the sale or exchange of capital stock in excess of its par or stated value; the excess of the par or stated value of capital stock retired over the amount paid therefor; profits on resales of treasury stock; and surplus arising from a recapitalization. Paid-in (or donated) surplus also includes donations to a corporation by its stockholders or others of cash, property and capital stock. Revaluation surplus is the appreciation recognized as arising from an appraisal of fixed assets.

Net profits, net income, and gains include profits from the disposition of any corporate asset (other than the corporation's own capital stock), and arise from transactions resulting in the acquisition of cash or of property which at the time of its receipt may ordinarily be classified as, or converted into, a current asset; or from transactions in which the consideration received includes the complete or partial discharge of a liability.

Standard Practice in Presentation of Surplus Accounts

The unqualified terms "surplus" and "capital surplus" are not sufficiently descriptive captions for balance-sheet purposes.

Earned surplus is not properly merged with capital stock or with capital surplus on the balance sheet.

Earned surplus accumulates from the date of incorporation or from the date of a recapitalization when a deficit is absorbed by the authorized reduction of the par or stated value of the outstanding capital stock.

Changes in earned surplus during the fiscal period following the date of the next previous balance sheet are pertinent details on balance sheets not accompanied by a statement of surplus.

Extension and improvement reserves, reserves for the retirement of corporate securities and other appropriated earned-surplus items, although not available for distribution to stockholders, are properly shown as subdivisions of earned surplus on the balance sheet. Where it is provided that retirements of a preferred stock or bond issue are to be made "out of earnings" and where it is the intent of the provision that earnings of an equivalent amount are to be retained in the business, such earnings should be segregated and distinguished on the balance sheet from unappropriated earned surplus.

Dividends paid in cash or property are properly charged against earned surplus. Stock dividends are reductions of earned surplus or of capital surplus in accordance with the authorization therefor. A loss resulting from the retirement of capital stock or from the sale of treasury stock is a reduction of paid-in or of earned surplus, according to the nature thereof. Disclosures are necessary when dividends, losses, or expenses are deducted from capital surplus.

Profits from the sale of fixed assets should be disclosed in the year of the transaction if the amounts are relatively significant.

When a corporation states its fixed properties on the basis of appraisal values which exceed the former book values, depreciation computed on the appraisal values is properly charged against operations. If a corporation has not in any way legally or morally obligated itself to maintain the assets at their increased valuation out of earnings, depreciation on the excess of appraisal over book values may, by reason of past practice, be charged directly against revaluation surplus, provided a disclosure is made.

Surplus of a subsidiary corporation accumulated prior to the date of the acquisition of its stock by a parent corporation is not a part of consolidated earned surplus. A dividend declared out of such surplus by a subsidiary is applicable by the parent corporation as a reduction of its investment in the subsidiary.

Occasions will arise where the practice as herein set forth cannot be strictly complied with, due to properly authorized corporate action under permissive statutes, or to agreements between a corporation and its bankers or investors. In these instances adequate disclosures must be made. A disclosure may be

general or specific and it may be limited to the year of the transaction or continued, according to the relative amount and significance of the item.

APPENDIX B

Summary of Results from Questionnaire of May 9, 1928

Question 1. Should earned surplus be restricted to the undistributed balance of earnings arising from the operations of the present corporation?

This question was faultily worded in that it presented two issues for a single "yes" or "no"—the first, whether only "operating" earnings should be included in earned surplus and second, whether earned surplus might date back to a predecessor organization. Because the second question starts with an "or," many rightly presumed that the intent of the first question was to refer to the nature of earnings rather than to the purchase of a surplus account by a successor corporation.

Question 2. Or may earned surplus include, without qualifying comment, profits arising from the sale, in toto or in relatively large amounts, of a company's plant assets?

Like the first, this question was vaguely phrased. While the majority of answers were in the negative as opposed to the affirmative answers to the first, it is probable that the "no" indicated the necessity of qualification, not the propriety of including profits from the sale of capital assets.

Question 3. If the 100 per cent-owned subsidiary is dissolved and its assets and liabilities are taken over by the parent company, may its earned surplus (all of which was earned subsequent to the date of acquisition of its stock by the parent company) be considered to represent earned surplus of the parent company and be included therein without qualifying comment?

If consolidated statements had been prepared, the net profit of the subsidiary companies accumulated since control was secured would have already been absorbed in consolidated earned surplus and no qualifications would now be necessary. A number of replies in the negative assumed that consolidated statements had not been made and indicated that qualification would be essential.

Question 4. In preparing a consolidated balance-sheet of a parent company and its 100 per cent-owned subsidiary, may the surplus of the subsidiary, earned prior to the date of acquisition of its stock by the parent company, be considered to be a part of the consolidated earned surplus and be included therein without qualifying comment?

As in the case of Question 3, the phrase "without qualifying comment" confused the issue and possibly raised the majority percentage. Due to replies to other questions relating to the same subject, no great reduction could have been expected. Most replies indicated that the inclusion of surplus prior to the period of control with surplus subsequently earned was highly improper and that if such surplus did not cancel off against the cost of the investment in the capital stock of the subsidiary, it should appear on the consolidated balance-sheet as paid-in surplus.

Question 5. May surplus arising from the sale of a corporation's par-value stock at a premium or from the sale of stock of no-par value at an amount per share in excess of its stated value be considered as earned surplus and included therein without qualifying comment?

The answers to this question were practically unanimous in the negative. A few replies had qualifications attached to them indicating that the answer was dependent upon the controlling state law.

Question 6. Is an unrestricted cash donation made to a corporation by one of its principal stockholders a proper credit to earned surplus?

A majority of the replies to this question were in the negative, notwithstanding that three of the largest accounting firms in the country replied in the affirmative. The inclusion of a donation under earned surplus would be an obvious contradiction of terms.

Question 7. If a corporation realizes actual profits on the purchase and subsequent resale of its own stock for cash, may such profits properly be included in earned surplus without qualifying comment?

Profits from the sale of treasury stock were voted out as earned surplus. Some of the answers indicated that if the amount of profit was small, no harm would result from consolidation. Other answers presented no objection to the inclusion in earned surplus of such profits but indicated that on the balance-sheet a continuous disclosure would be neces-

sary. A continuous disclosure would, of course, be the equivalent of putting the profits into a capital surplus acount.

Question 8. May surplus arising from recapitalization, created by writing down the par or stated value of the corporation's capital stock, be merged with the earned surplus under the title of "Surplus" on a published balance-sheet, without qualifying comment?

Most of the replies were in the negative, although a good many were qualified with reference to the Delaware law and the law of other states which permit the transfer of a portion of stated value to surplus available for dividends.

Question 9. If deficits covered by operating losses suffered by a corporation in prior years have been wiped out by means of a recapitalization (not reorganization) may the surplus actually earned since the date of recapitalization be shown, without qualification, as the earned surplus of the corporation?

The majority opinion on the point here presented was in the affirmative, but was in most replies qualified by a statement to the effect that it might be well to qualify the new surplus account for several years, setting forth the date on which it commenced to accumulate. Such comment on the balance-sheet would appear to be a qualification.

Question 10. If a corporation takes up on its books appraisal of fixed properties which is in excess of the former book values, should the depreciation on the new values be charged entirely against the year's operations and thence into surplus?

Eighty-five per cent of the replies to this question were in the negative, yet the Committee in the end came to the conclusion that the affirmative answer was correct. This is the only question on which the Committee found itself compelled to take an attitude against majority.

Question 11. Or is it proper for a corporation to charge depreciation on appreciation against the capital surplus arising from appreciation and to charge against the earned surplus only the depreciation on the old book values, either by making the charges directly to capital surplus and earned surplus, respectively, in the first instance, or by charging the entire provision against earned surplus with concurrent transfers from earned surplus to capital surplus of the depreciation taken on the appreciation?

This question being an alternative of Question 10 would call for an affirmative answer if one answered the previous question in the negative. Affirmative replies on Question 10 and negative replies on Question 11 were received from two nationally-known accounting firms.

Question 12. If the agreement covering the issue of preferred stock by a corporation provides for the setting aside annually out of earnings on March 1st of each year, of a stipulated sinking-fund provision, is it necessary to qualify the earned surplus account on a December 31st balance-sheet with respect to the provision to be made on March 1st of the succeeding year?

The majority of the replies were in the affirmative. Many took the opposite stand, indicating in their answers that provisions of the agreement with preferred stockholders should be referred to under the heading of capital stock.

Question 13. Should surplus appropriated for the retirement of preferred stock under the provisions of a preferred-stock agreement be considered as permanently appropriated until the entire issue of preferred stock has been retired?

A great many answers stated that much would depend on the agreement with preferred stockholders. It was intended that the question be limited to those cases where no agreement governed. As in the case of sinking-fund provisions for bonded indebtedness, the reserve is desirable for the protection of the investor. Presumably the proceeds of the original issue were necessary for the fixed-asset and working-capital requirements of the business. If nine-tenths of an issue has been retired, an equivalent amount should have been accumulated in the surplus reserve. Otherwise, if the balance of surplus is small, it may be necessary, perhaps impossible, to pay off the remaining one-tenth except by depleting the investment in capital assets or current assets. The desirability of a sinking-fund reserve is not sufficiently recognized by the rank and file of the accounting profession, notwithstanding the majority answer of "yes."

Question 14. Is the gain arising from the cancellation of an open account payable by the parent company a proper credit to earned surplus by subsidiary?

The majority answer was "no." A number who replied "yes" possibly forgot that the

holding company is a stockholder and that a stockholder's contribution in excess of his stock subscription is paid-in surplus. Others contended that the proper entry depended on the disposal of the item by the parent company. From the nature of the question it would seem obvious that the parent company had added the sum to its investment account. A few correctly stated that if the obligation related to services and the bill had been canceled, the earned-surplus account of both companies would have been affected.

Question 15. If an appraisal of fixed assets has been taken up on the books of a corporation and if the appraised values have been fully depreciated by charges to operations from year to year, is it sound accounting procedure after the full depreciation has been provided, to transfer the surplus arising from appreciation from capital surplus to earned surplus?

In view of the answers to Questions 10 and 11, an affirmative answer would be expected here. A number of persons took the position that the revaluation surplus was in reality a reserve for replacements and should remain without transfer to earned surplus. Inasmuch as a replacement reserve is ordinarily a division of earned surplus, a negative answer based on that reasoning would be inconsistent.

Question 16. In the event a bond issue is retired, is it sound accounting procedure to charge off the discount unamortized at date of retirement against a surplus arising from an appraisal of the company's fixed assets?

The answer here was overwhelmingly "no." Many answers brought out the fact that the accounts were in no way related.

Question 17. If, in a plan of recapitalization, a bond issue is retired and a capital surplus is created by reducing the par or stated value of a corporation's capital stock, is it sound accounting procedure for the corporation to write off the discount unamortized at date of retirement against the capital surplus created by reducing the par or stated value of the stock?

A bare majority answered "yes," presumably basing their conclusion on the supposition that the reduction of the stated value had been made for the purpose of absorbing the unamortized discount. Without this hinted-at connection, the answer would have deserved a "no," since bond discount, without special provision therefore, can be charged properly only to profit and loss.

Question 18. Is it sound accounting procedure to write off the unamortized discount on bonds still outstanding against capital surplus created by writing down the par or stated value of the corporation's capital stock, in order to relieve future earnings of the annual amortization charge?

This question differs from the preceding by suggesting a write-off bond discount with bonds outstanding, as the result of a refinancing. The contrast of position and the inevitable "no" that accompanied the answers do not definitively cover the field that lies between. For example, in Question 17, what would the average answer have been if the bonds had not been retired during the financial reconstruction?

Question 19. In preparing a balance-sheet, is it sound accounting procedure to show losses from operations as a charge against capital surplus and to carry forward the net figure as capital surplus in stating the opening surplus on the balance-sheet prepared at the end of the succeeding year?

As in the case of other questions involving charges to capital surplus, the majority of answers were opposed to the reduction of the various forms of capital surplus by items that would normally diminish earned surplus. The questions involving this point were not broad enough to enable the profession to outline its views with precision.

Question 20. Would it be sound accounting procedure for a corporation to write off goodwill or other intangible assets by charging them off against a surplus arising from the appraisal of the company's fixed properties?

The answers to Question 20 offer an interesting study as between groups:

(a) Practically all the larger firms of accountants answered in the affirmative.

(b) A bare majority of Institute members answered in the negative.

(c) A large majority of the A.A.U.I.A. members answered in the negative.

Probably the significance is as follows: In theory the distinction between revaluation surplus and goodwill is such that no interrelation or offset is possible; the first is a valuation account reflecting enhanced capital asset worth, while the second is usually the initial valuation expressing capitalized earning power. Experience in dealing with goodwill,

however, has apparently convinced practitioners that this intangible is also, more often than not, a valuation account which might properly reduce the par value of the stock issued for it. In reality, therefore, this question deals with two valuation accounts. To offset one with the other means that the practitioner has reached the conclusion that recent increases in the values of tangible assets are more real than initial values of intangible assets and that no objection can be raised to the elimination of so much of the good-will account as is represented in increments recognized as existing in tangible valuations.

Question 21. Should all dividends declared be considered to be payable out of earned surplus, unless definitely stipulated otherwise in the declaratory resolution?

The answers here were overwhelmingly in the affirmative. It is thus safe to say that the accounting rule is: dividends, both in cash and in stock, are chargeable to earned surplus even though a deficit is created, unless the directors elect to authorize the reduction of some other form of surplus. Another application of the same rule: a deficit created by a dividend cannot properly be merged with paid-in or revaluation surplus.

Question 22. Should dividends declared by a subsidiary out of the earnings accumulated by the subsidiary prior to the date of its acquisition by the holding company be added to the earned surplus of the holding company?

The inference underlying the ruling negative answers to this question is that the dividends of a subsidiary paid from surplus earned prior to the period of control are properly a reduction of the investment account of the holding company. A few answers contained the qualification that the credit to earned surplus would be proper if the stock had been purchased for not more than par or for substantially less than its book value. These few apparently did not recognize the general rule that credits to the earned surplus account of a holding company are always earned profits of the consolidated group except in the event of the existence of the uncompleted transactions.

Question 23. Should dividends be declared, "payable out of the surplus of the corporation" without any definite designation of the surplus out of which they are payable, in excess of the balance in earned surplus be shown to produce a deficit?

On this question, and on this question alone, Institute members and accounting instructors parted company. Yet the difference does not seem to be one of theory or of the application of theory; it lies rather in the significance of "capital surplus" as used in the question. For some reason a number of instructors made clear that they assumed that capital surplus might have originated in earned surplus, i.e., might consist at least in part of appropriated surplus. No textbooks have been found that so define capital surplus but it is probable that if a few instructors made such an assumption, many others did also. It seems safe to assume that had the usage of the terms employed in the questions been made clear, more answers would have been alike. In any event, it seems difficult to believe that accounting instructors would favor the concealing of a deficit created by an ignorant or improvident board of directors. It is likewise difficult to believe that accounting instructors would favor the use of the word "surplus" as meaning anything else than "earned surplus" except where all concerned were put on notice by appropriate description or qualification.

Question 24. Or may such dividends, if declared in excess of the balance in earned surplus, be shown on the balance-sheet as a deduction from all types of surplus combined?

There was a slim majority of affirmative answers to this question. A number of answers were counted as affirmative that read substantially as follows: "Yes, provided earned surplus were shown as having been exhausted." Undoubtedly this type of answer would indicate that only the *balance* not absorbed by earned surplus should be subtracted from the other forms of surplus. Others assumed, as in their answers to Question 23, that capital surplus might consist, in whole or in part, of appropriated earned surplus. Another group made plain that their answer would depend on the law of the state under which the corporation was formed.

Question 25. If dividends are to be shown on the balance-sheet as a deduction from all types of surplus combined, should not the board of directors of the corporation take appropriate action to designate the specific surplus accounts from which the dividends are to be considered to have been payable, in order to permit the proper segregation of the balances in the several surplus accounts as of the beginning of the following year?

Perhaps the affirmative answers to Question 24 were partly dependent on the phrasing of Question 25, nearly all the answers to which were "yes." This answer can only mean that the accountant stands ready to charge capital surplus with dividends provided the directors will assume the responsibility. Needless to add, many would doubtless insist that the balance-sheet contain needful disclosures where such action is taken.

As a whole, the questionnaire was defective in not presenting sufficiently broad theory questions and in setting forth practical situations with too much detail left to the imagination. Yet the response indicated a genuine interest in the Committee's activities and did much to encourage a completion of the project. A dozen firms, including practically all of the nationally-known organizations, submitted group replies with supporting reasons attached which proved to be of great value.

Below is a tabulation of replies received from members of the American Institute of Accountants and members of the American Association of University Instructors in Accounting in terms of the ratio of the majority reply to the total replies received:

Question	*Majority reply*	*Ratio of majority reply to total replies from members of A.I.A.*	*A.A.U.I.A.*
1	Yes	62%	70%
2	No	58	71
3	Yes	77	71
4	No	74	82
5	No	97	99
6	No	89	96
7	No	65	73
8	No	90	93
9	Yes	66	70
10	No	85	85
11	Yes	90	89
12	Yes	64	62
13	Yes	79	78
14	No	64	81
15	Yes	77	73
16	No	88	90
17	Yes	54	53
18	No	85	94
19	No	89	83
20	No	52	76
21	Yes	97	97
22	No	73	77
23	Yes	51	—
23	No	—	56
24	Yes	59	58
25	Yes	97	97

A STUDY OF PUBLIC ACCOUNTING PERSONNEL FROM THE VIEWPOINT OF PROFESSIONAL ADVANCEMENT

CHESTER F. LAY

WE ARE addressing you as a firm active in the Illinois Society of Certified Public Accountants, believing you may wish to join us in a pioneer research study of a serious problem confronting the public accounting profession—that of recruiting, training, and retaining young men to whom may be entrusted the welfare of the profession in years to come. The enclosed copy of a recent letter from the President of the Society will interest you and is self-explanatory.

While opinions as to what the profession demands of, and offers to its practitioners can easily be had in conversation and even in advertisements, we think there is need for a careful and impartial survey of the facts as found in the experience of a large number of individuals of all ranks in public accountancy. Only facts can provide a permanently satisfactory approach to the problems of personnel which affect every public accounting firm and its present and prospective employees, as well as the educational side of the profession.

Accordingly, we are offering to assemble the essential facts concerning the personnel situation in the Chicago district, and our summary and conclusions will be freely available to you. We believe no such study has ever been made and that the findings should be useful to you for comparison with your own personnel policies and practices.

The foregoing quotation indicates the approach made by a representative of "the educational side of the profession" of public accountancy, to accounting practitioners, in an attempt to survey the personnel situation in the metropolitan area of Chicago as of May, 1930.

But why make the attempt? That instructors as such, are interested in such an undertaking may be due to the frequency with which they have heard their former student express earnest (and sometimes, apparently quite just) criticisms of the personnel practises intended to induct (or initiate) the new generation of public accountants into the profession for which we have tried to prepare them. A temperate viewpoint upon wage scales, lack of recognition of their education in competition with those trained only "in the field," and especially upon occupational instability due to seasonal work, may be illustrated by a bewildered young certified public accountant with a family to care for, who appended to his questionnaire the statement that:

> . . . the colleges are graduating a number of men trained in accounting theory but inexperienced in business. This is right, but there is no place for them in the industry until the first of the year, and then only a very few can hope for more than a few weeks' employment at scant pay. . . . Is it right that a learned profession requiring so much in training and skill of its employees should offer such intermittent employment? . . . these problems may be properly presented for help in solution to the colleges which are training so much material for a profession evidently (already) overcrowded. I am not bitter. I want work so I can support my family.

Moreover, instructors are aware that leaders among practising accountants are also coming to recognize that the interneship problem in accountancy is far from being as adequately solved as in law or medicine, as evidenced by editorials[1] and formal articles in the professional literature, by the creation and activities of committees on education in a number of state

[1] For the most recent, recommending lower wages for juniors, see *American Accountant*, December, 1930, pp. 533-534.

societies of certified public accountants, and by the activity of, and diversity of judgment concerning, the Placement Bureau of the American Institute of Accountants. If the apprenticeship method were as prevalent here as in Great Britain, the parties at interest would be the employer and employee, and the present research would not have been carried out; but the remarkable extent to which an educational section of the profession has grown up and tended to supplant the age-old apprentice method in recent years, makes it inevitable that as an interested but impartial third party, representatives of our university schools of business should undertake to provide a factual basis for the vocational choices of the student employee, for the formulation or evaluation of personnel policies and practises of employing firms, and for the guidance of instructors in public accounting subject matter as to curriculum and teaching method.

To secure data of sufficient quantity to make possible an ideal statistical analysis, accounting for all factors involved, and adequate for the needs of all three interested groups, would require research of much greater geographical scope (preferably national), and with similarly greater number of sponsoring organizations, than could be utilized in a first attempt to enter this hitherto unexplored field of confidential, if not sacred, information. Consequently, the number of cases represented in this study require that caution and judgment be used in drawing generalizations from them. However, no justification seems necessary for the writer's assumption that factual data, even if based on relatively few cases, are preferable to the paucity of existing information on actual conditions and difficulties of our former students as to salary, rank, and other aspects of their fundamental task of securing advancement within the profession.

It was, then, with such a conception of the reality and urgency of the personnel problem, and of the responsibility resting upon the teaching group, that the appeal quoted above was addressed to the 189 certified public accountants who are principals in the 151 Chicago firms listed in the city telephone directory. Practically all advisers had predicted that accounting firms would refuse us access to their staff, but thirty-two firms (21 per cent) responded, telling us the number of partners, seniors and juniors, in their firms, and the number of men released from May, 1929, to May, 1930. Questionnaire forms for employed men were then delivered personally to each firm. The principal of the firm interviewed had these schedules supplied to each member of their staff who was asked to fill in the form and return it direct to the university without divulging his name or that of the firm. From each firm we received also a list of names and addresses of men released during the preceding year together with the firm's explanation of reasons for releasing them, the reasons being given in totals rather than for each individual man. Our schedule Sheet 3 was mailed direct to these released men. In this manner we secured practically complete case histories of the vocational lives of 260 public accountants, to the end of the public accountant's natural year, May, 1930. The adequacy of this sample may be judged in part by the following: (1) all known firms were given the opportunity to be included; (2) approximately one in five firms did cooperate,[2] (3) 39 per cent of all men associated with these firms during the preceding year provided the data requested; (4) returns were received from all ranks in the following proportions: owners or partners, 13 per cent; seniors, 45 per cent; semi-seniors, 8 per cent; and juniors, 34 per cent; (5) of the returns received from employees, 57 per cent were from men still at work in May and presumably permanent members of the staff, while 43 per cent were not; (6) the returns represent 46 per cent

[2] Several of the largest and best known firms are represented, as well as smaller firms and individuals practicing alone: 4 with more than 25 employees (all figures are for May); 15 employing 6 to 25; 4 firms with 5 or fewer; and 10 without employees.

of all permanent employees, and 37 per cent of all men released; and (7) 34 per cent of men reporting are college graduates, 37 per cent have had some college training but did not receive a degree, and 29 per cent have had no college work.

Due to the necessity of assuring coöperating firms that their particular salary schedules and other personnel practices would not be made the subject of criticism, all data received (except that relating to reasons for releasing men) were entirely anonymous. Consequently, the possibility of prankish or fraudulent replies had to be faced. After careful editing of the Schedules received upon the basis of internal consistency and reasonable conformity to conditions known to prevail in the profession, only one return was rejected as probably spurious. While not all questions were answered on every questionnaire, in general we were agreeably surprised at the fullness of data received, and the evident care taken and interest shown in the research by the individual accountants.

The findings relate to the nature of the public accounting profession as measured by such factors as age, education, experience, ranking, and income of its members of various ranks; the requirements for, and methods of entrance into the profession; its occupational instability from seasonal or other causes; and the relation of various measurable "causal" factors to success within the profession. It is not contended that this study makes any absolute or final settlement of these various questions relating to vocational aspects of public accountancy as a career; the reader may judge for himself whether and to what degree the facts stated as true of the 260 accountants studied may apply generally, or in his college or community. Naturally, the writer is in the position of investigator only, and no implication of approval or disapproval of conditions found to exist should be read into the following statements of fact which, due to limitations of space and the special interests of accounting instructors, are restricted in scope to factual data thought to be at least suggestive as to needs of the profession for, and its attitude toward, the accounting product of the schools. First will be presented data showing to what extent the professiön is permeated with educational influences, after which will be considered the bearing of education upon professional advancement.

The profession is young and so are its members as reported to us: mean ages being 26 for juniors, 34 for seniors, 41 for owners, and 32 for all combined. Since the responsibility given to beginners is usually greater than is true of "internes" in other professions, it has been said that "no firm can have a large proportion of beginners"; yet 46 per cent of our men connected with firms sometime during the year 1929-30 reported a total public accounting experience record of less than 24 months. While men securing only winter season work may have accumulated less than this amount and yet not be strictly "beginners," these 46 per cent do have less than the mean time spent in the junior rank by those promoted beyond it, which is 28 months. Both the low average age and the large proportion with little experience may indicate that young men are welcomed to accounting firms, but an inexperienced student's prospect for securing an opening is influenced by the fact that when applying for a position, he is competing with other applicants who have already had an average of 7.5 months' experience if it be a junior position; 29 months for a place as semi-senior; and 36 months for a senior position (averages represent prior public accounting experience of 225 men at time of securing present position).

Some men enter accounting firms direct from school without any type of earning experience, some come from bookkeeping or accounting positions in private business, and others have had non-accounting experience. Do college-trained men differ from others in the route by which they arrive? The same percentage of college men (27 per cent) and men without college training (26 per cent) have entered entirely

without experience; but college men (71 per cent) have entered via the private accounting route more frequently than other men (63 per cent); while only 2 per cent of college men now in public accounting have turned to public accounting after having had other non-accounting business experience, as contrasted with 11 per cent of men who have not attended college who have made such a transfer of occupations.

Some special interest may attach to the salary effect of transferring from private to public accounting, in view of the great preference college men show for this avenue of approach. College graduates taken alone (excluding "part college" men who did not graduate) were able to transfer without a loss in monthly income if they had remained in private accounting less than two years; those whose private experience was more than six years incurred a monthly loss of $42. If all college men are combined with "non-college" men, and extent of private experience is ignored, there is an average (mean) monthly loss of from $13 to $29 according to time spent at school, the least loss accompanying the greater amount of education. Apparently an interneship period is demanded with its depressing effect upon income, which experience in other related work cannot overcome, but which can be partially avoided by education.

What higher institutions provide Chicago accountants with their formal education? In our sample, 39 colleges[3] and universities are represented, and in the following frequencies: Northwestern, 16; Illinois, 12;[4] Chicago, 10; Minnesota, 8; Iowa, 6; DePaul, Notre Dame, Michigan, and Wisconsin, 3 each; Columbia, Glasgow, Missouri, and St. Louis, 2 each; and one each from 26 other institutions, including universities of the following foreign countries: Austria, Belgium, Canada, England, Germany, and Turkey. Slightly less than one-half of these men have actually received any degree. No authoritative pronouncement has been made, either by representatives or practitioners or of accounting instructors, as to the amount or kind of education required or suitable to prepare for the public practise of accountancy. The Chicago group studied consists of 29 per cent who have no college education whatever, 37 per cent who did not finish college, and only 34 per cent who are graduates. It is significant that the graduates comprise the largest part of the junior and semi-senior ranks, while "part college men" are the greatest section of the senior rank, and "non-college" men are the principal type among the owner-partner group. To compare the percentage of owners (60 per cent) having some college background with that of college "trained" juniors (82 per cent), at least suggests that the dominant party to the employment relation could be understood psychologically if he should fail to value formal education in which he is at a disadvantage, as highly as the experience factor in which he excels. At any rate the data in hand do not characterize accountancy as being filled with educated men to the degree that prevails in medicine and law, and least of all in the group generally considered as the leaders of the profession; but the trend toward greater use of our "product" seems to offer hope as to the future, at least for the clients.

Of more vital import to accounting instructors is the matter of technical accounting education as found in a representative group of public accountants. The Bureau of Placements of the American Institute of Accountants has well expressed the traditional view that the apprentice method is adequate, if not preferable to college technical training, in a release some years ago to university student newspapers, carrying the following headlines: "Training in Business for College Men: Attractive Opportunities in Accountancy for Graduates of General Cultural Courses: Technical Training Unnecessary at Start." To what extent is the profession made up of men with a cultural college

[3] Special accounting schools are not included in this list, but are considered below.

[4] Names refer to state universities instead of states.

education, but no technical college training for their future vocation? In Chicago, 28 per cent of the college graduates, and 43 per cent of "part college" men reported that their alma mater contributed nothing to their technical preparation. Including all men regardless of extent of general education, 26 per cent of partners and 16 per cent of their employees report that they have never had any formal school work whatever in accounting. Distinguishing between those who took three or more courses, presumably "majoring" in accounting, and those who took the minimum of one or two required by commerce schools, one in four of the men studied had had only the minimum. Thus 41 per cent of those reporting failed to take full advantage of the training program available. Is this adequate to satisfy a normal desire for recognition and for service of "the teaching side of the profession?"

Not only schools of commerce of college level, but also high schools and special residence schools and correspondence schools provide "course"[5] training for accountants. To what extent do accountants rely on each type of school? Of those equipped with any accounting course training whatever, 48 per cent secured it at college; 34 per cent from special schools; and 18 per cent at high school. Tested by the total number of student-course registrations, however, college work entirely dominates the field: colleges, 71 per cent; special schools, 23 per cent, and high schools only 6 per cent.

Probably no exception would be taken to the assumption that there is a typical progression by which a prospective accountant moves from high school courses (if any are taken there) to college courses, and on to special school or correspondence school courses (at least, in case advantage was not taken of all courses offered in college). While the cases are few, it is worth noting that 80 per cent of those who are now accountants and who took high school courses, later took college accounting work; while 42 per cent of those interested in accounting at college later took additional courses in special schools, with which Chicago is well equipped. Of those college men who took no college courses but later entered public practise, a slightly smaller percentage have turned to the special schools for training, but such as have done so have taken an average number of four courses there, while those who had college courses earlier have taken only two courses each in special schools later. Considering all employees who have had any accounting courses in either college or special schools, an average number of 5.1 courses were taken; the average is less (4.0) for owners-partners. Those who did not finish college, whether or not enrolled in accounting courses there, are somewhat more inclined to patronize the special schools, than are those who received a degree.

Summarizing, more than half of all special school students of accounting had an opportunity to take such work at college; and those who took work at both types of institution utilized the special schools to almost the same extent as their college. Is the college instructor failing to cultivate his home market intensively enough? Is he hindered in competition, if such it be, by the rule of ethics barring him from advertising or other forms of propaganda? Or may it be that experience with an accounting firm is necessary to impress the aspiring young accountant with the value of formal technical course training, and, if so, does this indicate the motivating significance of temporary rush-season employment during his college career?

The accounting instructor's interest in the student obviously does not end when the instruction is ended. At that time, advice may be called for as to the best means for the student to approach the prospective employer. In this study, juniors were found successfully using various methods: univer-

[5] In all discussion of courses, the term means three semester hours or its equivalent. Unless "high school" is specially mentioned, the term "course" refers to college course, or equivalent special school (including correspondence) course.

sity employment bureaus, 19 per cent; personal acquaintance with staff members or clients of the firm, 29 per cent; with self-reliance, in the form of "uninvited application" represented with 44 per cent still the most used of all.

Can the successful applicant be told that he can now face the future, confident that his interneship of more or less routine tasks will continue, and with application to duty and the passage of time, it will lead him on into his chosen profession? Not at all. The insecurity of the junior accountant's position is well known, and is in high contrast to that of the British apprentice, and to that of other American professions. This study was made after the end of the busy accounting season, and 46 per cent of junior accountants were found to have been "released," after a modal employment of only three months. Whether the summer of 1930 was exceptional, or to what degree, may be left to the reader to decide. Would it not be considered shocking if 46 per cent of the medical internes in American hospitals were discharged in any year? That seasonality combines with the fact of interneship in producing such occupational instability, is indicated by the release of 16 per cent of seniors also. Obviously, however, the purely seasonal influence is usually overemphasized, since juniors are released three times as commonly as seniors.

In fact, certain practitioners admit that the extraordinary turnover is not entirely due to the intermittent nature of the work but, instead, contend that it is in great part the result of "squeezing out" those not suited to the work. Since lack of continuity of employment may cause the beginner to be "side-tracked" and left permanently outside his chosen profession, and since it certainly slows his professional advancement, considerable interest attaches to the nature of any failures included in reasons given by firms for releasing members of their staffs. "Seasonal nature of the work" was listed for more than half the men; with "insufficient experience" and "insufficient knowledge of accounting" each applying to one man in six; "inability to meet the public," one in ten; and "inaccurate work" tied with "failure to coöperate with superiors" each being applicable to one in twenty; with "slowness" and "low intelligence" given as the least common reasons for discharge. Some cause for praise of beginners is given by the rarity of such gross faults as the last four, and by the report that it was in no case necessary to discharge for "disrespect for confidential facts."

Apparently the most common view held by the "practical man" respecting the selection and retention of the oncoming generation of accountants is that certain personality traits are essential. Illustrations are tact, poise, perseverance, coöperativeness, accuracy, and trustworthiness. But so far, an abundance of opinion had had to serve in the absence of careful research as to their nature and relative weight. While any instructor's ambition to undertake such a difficult type of case research in order to discover this reputed "open sesame" to accounting success should not be discouraged, it may be remembered that as yet the practitioners have not agreed to cooperate with instructors in the most obvious matter of requiring professional college training for "internes"; and until they do so, it is easy for the college accounting instructor to agree with the partner in a prominent firm who, desiring to make some constructive suggestion on how the instructors and researchers can help states:

> Perhaps it is asking too much of the Schools of Commerce to keep people unfitted by nature for public accountancy from ever attempting it.

But until some researcher does devise a method for the analysis of personality traits of successful and unsuccessful public accountants, we may find some clues to success in such factors as can be measured, notably training and experience.

Success may be measured by the attainment of the professional status through governmental and social recognition upon receipt of the C.P.A. certificate or "degree"; by the process of ranking within

accounting firms; and by the salary received.

College men think of the C.P.A. degree a great deal while under accounting instruction at school. Does this interest pervade the offices of accounting firms? In our study, 32 per cent have the certificate, 17 per cent are actively attempting to secure it, while 51 per cent are apparently indifferent.

Those who have the certificate are presumably the finest trained, technically, of all the profession. To what extent are they the product of collegiate institutions? In THE ACCOUNTING REVIEW for March, 1928, the Chairman of the American Institute Bureau of Placements reported that 22 per cent of the Institute membership (C.P.A.'s or the equivalent) are college graduates; of the Chicago C.P.A.'s we found the percentage to be 34. This is exactly the same fraction of certificate holders having degrees, as of the entire sample of public accountants. That college graduation as such seems to have little relation to success in securing the certificate is further evidenced by the fact that almost as large a percentage of certificate holders were never at college (31 per cent) as were college graduates (34 per cent).

Since the certificate is granted upon the examination rather than upon consideration of any educational preparation undergone at the hands of accounting instructors, it is pertinent to analyze the extent to which accounting instruction in schools is associated with success in striving for the C.P.A. We found 13.5 per cent of the C.P.A. group (excluding "waivers") had had no "course" training whatever, presumably achieving success in the examinations through experience and independent study of accounting literature. This percentage of C.P.A.'s without technical schooling is less than the percentage (18.1 per cent) of similar men to the entire number of accountants studied. While 13 per cent of certified men did not use the facilities of schools at all for their technical preparation, 38 per cent relied solely upon colleges, 34 per cent used only special and correspondence schools, while 15 per cent supplemented college courses taken with special school instruction. Contrasting colleges with special accounting schools, 59 per cent of all accountants with formal training preferred college work, but only 53 per cent of the certified men made the same choice. This implies excellence in special school training; or is it excellence in attracting students of experience and special ambition and aptitude?

Possibly all instructors would expect that C.P.A.'s are fortified with a larger number of accounting courses than are those not certified. Yet the average (mean) number taken by 74 men certified by examination is 4.9 courses, while the average number reported by 146 non-certified accountants is 5.1. Since schools of commerce provide accounting training for all students, whether primarily interested in the field or not, there is interest in the fact that approximately two-thirds of certified men "majored" in accounting while at school. The number of courses typical of men trained in "regular" as contrasted with special schools may have implications for advisers of students on registration day. Those C.P.A.'s who secured all their formal courses in college took an average number of 6.1, those who relied entirely on special schools averaged 3.5, while those who had both types of training averaged 4.8, as far as may be judged from only eleven cases.

A great deal is commonly said as to the necessity of experience as a foundation for passing the examination. Does education serve as a substitute for actual experience? That it can do so in a few cases is shown by the success of four college graduates who had had no experience at the date of writing the examination. Also, the mean number of months' experience prior to securing the certificate varies greatly according to educational preparation; the group with no courses taken, mean months 117; special courses only taken, mean months 75; college courses only taken, mean months 47. Of course it would be rash to

assign to education the full credit for this difference.

Possibly a measure of the relation of education to experience in preparation for the C.P.A. examination can best be given on a per-course basis. With each course taken, certified men "mixed" 12.6 months' experience on the average. The amount of experience combined with each course differs widely, however, between those who took only one or two courses (average 44 months), and those who "majored" in accounting (average 10 months). Those who had the minimum number (one or two) at college later combined 48 months' experience with each course before securing the certificate, while those who secured the same number of courses from special schools averaged only 36 months per course. Those who majored in accounting at college had their certificate delayed only 4.4 months for each course taken, while similar men who used special schools exclusively waited 11.8 months per course. The wisdom of majoring in accounting is evident from the experience of men who used both types of school: college men shortening their per-course experience from 48.3 months in the case of men who took required courses only, to 4.4 months for those who specialized; and special school men similarly shortening the time per course from 36.3 to 11.3 months. The final comparison is complimentary to college men (educators or students?), for the average experience "required" to accompany each course is 17.6 months for all those who relied on special schools exclusively, but only 7.4 months for men who took all their work at college. Naturally, however, in interpreting these facts, consideration must be given to the tendency of special school men to undertake their formal course work after having acquired practical experience. Much can be abstracted from the analysis of certified men which is satisfying to instructors in both types of school, but not enough to make joy unrestrained in either.

Since rank was considered above, but slight attention is necessary here. Not all juniors are destined to rise higher; while some few are assigned a higher rank as beginners. The combined experience of all those who had held a junior position shows that twenty-eight months of actual public accounting experience was required before being "promoted." A trend may be indicated by the fact that present semi-seniors, who have most recently undergone the junior apprenticeship, left that rank after only twenty-two months. Not all principals and seniors go through a second apprenticeship on a higher level as semi-seniors, in fact, fewer than half have done so. This rank seems to be increasing in favor, however, and thus is lengthening the period prior to receiving that status of "senior" which proclaims one a master in his field. Seventeen additional months of public employment were spent as semi-seniors, on the average, by those who have advanced through and above this rank. It may be justifiable, however, to emphasize the distribution of college-trained men among ranks. Grouping together as "internes" both junior and semi-senior ranks, 78.5 per cent have attended college; whereas only 68.4 per cent of seniors, and 60 per cent of owner-partners have done so. Ever-increasing popularity of college education in general, and of practical courses especially, inevitably causes an increasing percentage of so-called educated men to knock for admission to all professions. But in accounting, where the owners of firms have been trained primarily in the hard school of experience, and in which the tradition of apprenticeship still persists, it is not strange if college course training is not as much respected by the higher ranks as instructors would prefer. This condition is doubtless aggravated by the contrast between the high proportion of the profession in the lowest (junior) rank, 37 per cent in May as tested by number of men, and the share of the profession's total accumulated experience possessed by that rank, namely, 8 per cent, since the group (partners) which assigns rank to all employees itself possesses 33 per cent of the profession's ex-

perience, while constituting only 9 per cent of its number. With employees more imbued with the viewpoint of colleges than are the employers, what can instructors do to alleviate the difficulty which the student often faces, of adapting himself to the place accorded him in the firm? Or should instructors, possibly through their own Association, endeavor to secure more recognition for college-trained accountants?

While success in public accountancy may be gauged by the prestige rewards of the government certificate and the senior or partner status within a firm, the most tangible criterion is that of income. No attempt was made to study the income of partners, not merely because of the difficulty of securing such information, but even more because only employees' salaries give an index to the personal judgment of the salary-fixing group of the profession (partners) as to the value of various combinations of education and experience possessed by those employed.

That salary and rank are closely related is shown by the entrance salaries of those whose first connection was at various ranks: starting as juniors, mean salary of 170 men was $140 per month; starting as semi-seniors, 17 men, $179; and as seniors,

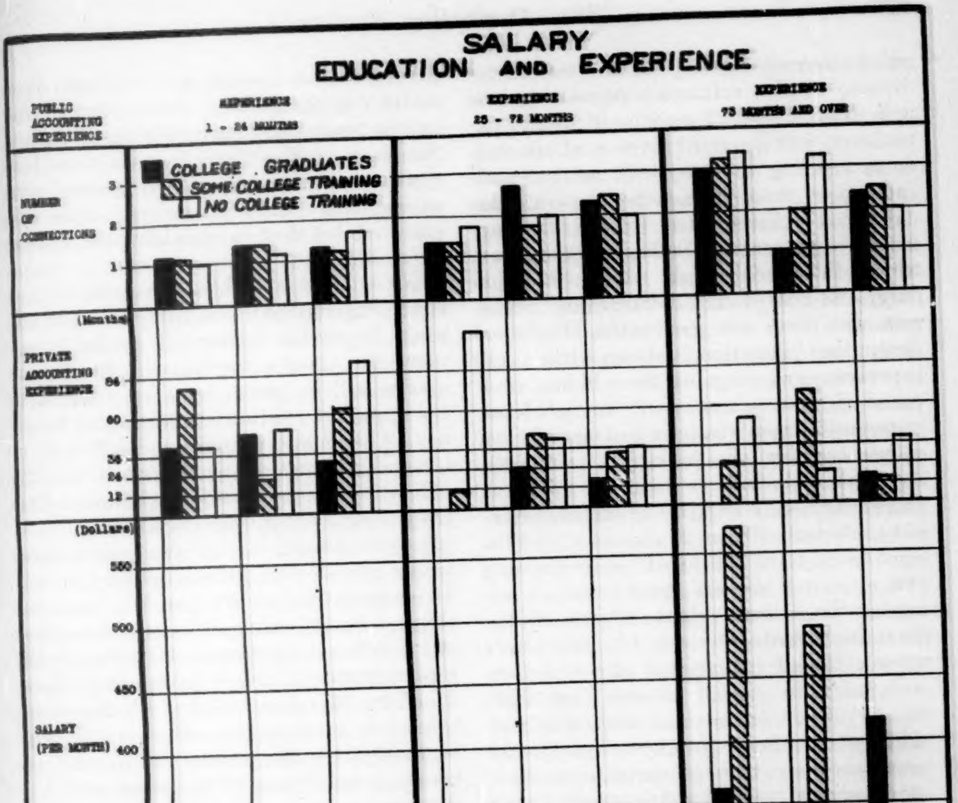
Group studied	*Number of Cases*	*Mean Salary*	*Probable deviation of the mean if similar samples could be taken repeatedly*
All employees of all ranks undifferentiated	219	$237	$ 5.40
Non-college men, all ranks, and all experience groups...	60	241	7.46
Partial college, all ranks, and all experience groups..	76	244	10.43
Graduates of college, all ranks, and all experience groups..	83	228	8.90
Non-college, all ranks, 1-24 months' experience	22	159	5.45
Partial college, all ranks, 1-24 months' experience	33	186	7.44
Graduates of college, all ranks, 1-24 months' experience	46	160	3.82

23 men, $233. Present salaries of college graduates and other ex-students are contrasted with those of non-college men in the following table. The trustworthiness of these average salaries is shown by the last column, indicating that repeated investigations of similar size samples would probably ($4\frac{1}{2}$ chances to one) yield an average not different from the present average of $237 by more than $5.40, from line one, and so on.

To save space, the salaries of only one experience group is given separately in the table; but the page chart showing "Salary, Education, and Experience" provides opportunity for the interested analyst to make at least 135 comparisons, if endurance permits.

Although the writer recognizes the interpretive ability of his reader-colleagues, it may not be amiss to offer some explanation of this rather complicated chart. Although many personal and imponderable causal factors doubtless assist in fixing salaries, the chart attempts to present an analysis of the relation to salary of five measurable factors which might be presumed to be causal in nature. These are (1) public accounting experience in months, (2) private accounting experience in months, (3) variety of experience as shown by number of public accounting firms worked for, (4) general education in years, and (5) technical accounting education as measured by number of courses taken in college or special schools. The chart is in three sections. The principal section is at the bottom and shows average salary received by each of 27 groups of men; the smaller sections above indicating private experience and number of public accounting firms worked for. For example, the extreme left column of the chart represents the average (mean) of the same six men, whether indicating salary, private experience, or number of connections.

The chart is divided into three major divisions from left to right also: all men represented in the left division by nine columns having not more than 24 months'



SALARY
EDUCATION AND EXPERIENCE
PUBLIC ACCOUNTING EXPERIENCE
EXPERIENCE 1 - 24 MONTHS
EXPERIENCE 25 - 72 MONTHS
EXPERIENCE 73 MONTHS AND OVER
COLLEGE GRADUATES
SOME COLLEGE TRAINING
NO COLLEGE TRAINING
NUMBER OF CONNECTIONS
3
2
1
(Months)
PRIVATE ACCOUNTING EXPERIENCE
84
60
36
24
12
(Dollars)
550
500
450
SALARY (PER MONTH)
400
350
300
250
200
150
100
50
0
ACCOUNTING COURSES TAKEN
0
1 - 2
3
0
1 - 2
3
0
1 - 2
3
Number of Men
EXPERIENCE 1 - 24 MONTHS
6-3-7
7-7-8
34-18-7
EXPERIENCE 25 - 72 MONTHS
3-3-4
7-7-6
12-18-7
EXPERIENCE 73 MONTHS AND OVER
4-4-5
1-3-7
10-8-10

public accounting experience, the center division of nine columns representing men with from 25 to 72 months of actual experience, and the right division of nine columns relating to those with most experience, more than 72 months. General education is differentiated by the shading, black representing college graduates; white, those with high school education only, and cross-hatched indicating college men who have not graduated. Technical accounting education is shown within each experience grouping, by three blocks composed of three columns each: the left block representing men who have had no technical course training whatever ("0" courses), the center block have had the minimum number typically required of school of commerce students ("1 or 2" courses), and the right block have "majored" in accounting ("3 or more" courses taken). As an example, the extreme right column of the chart represents 10 men (1) who have never attended college but (2) who have each taken in special schools (not high schools) three or more courses. The (3) public accounting experience of each is 73 months or more, their (4) private accounting experience averages 40 months; (5) the average number of firms worked for is two; and their average salary is $308.

Any careful examination of salary as correlated with these causal factors considered singly will demonstrate the utter necessity of studying their influence *in combination*, either by the method of partial correlation or by charting. Meanwhile, the former method is being employed, and it is hoped that when completed, some definite conclusions may be announced as to the relative weight of each factor in determining salaries. However, the complexity and amount of computation involved preclude the use of partial correlations except for totals; consequently the charting method may be preferable for certain purposes. The prime limitation of the latter is the fewness of cases, caused by the necessity of analysis into three experience groups, each subdivided into three technical education classes, and each of these again segregated into three general education groups. By such refining of classes, the chart enables three factors to be held constant (public experience, general education, and course training), while the variations of the two remaining factors are observed.

No attempt is made here to make all possible comparisons from the chart and explain them; the reader will prefer to explore the jungles for himself. Brief summaries will be given, however, concerning the apparent relation of each factor to salary. The simple correlation coefficient of General Education to Salary is .07712, indicating no relationship whatever. This surprising fact is corroborated by reference to the chart, which shows greatest education paired with greatest salary in only 14 comparisons of 27 (or 25, since the single case 73, course 1-2, graduate, does not permit a comparison). Reference to the central section, Private Accounting, shows 11 of the 13 comparisons in which greater education receives less salary to be "explainable" by the amount of private accounting experience of the group with less education.

Similarly, Accounting Courses are correlated ($r=0.11621$) so as to indicate no appreciable relationship with Salary. Again, reference to the chart shows that considered alone, more courses are found with more salary in only 12 comparisons; but the overpowering weight of private experience is suggested in 11 of the contrary cases.

Turning to experience, then, the ungrouped total of Private Accounting is positively correlated with Salary in the amount of .24370, a significant relationship. It is surprising that taken alone higher private experience is found to accompany higher salary in 19 of 25 possible comparisons; and it is noted that this is true in every instance for comparisons among college graduates of varying experience and course training. Variety of experience (Number of Connections) has a still

more significant positive correlation with Salary, of .40750. Twenty of twenty-five comparisons find a higher number of connections paired with the higher salary, which is true in all comparisons among college graduates, and in 7 of 9 among noncollege men. The final factor influencing salary is most powerful of all, apparently, for Public Accounting Experience has a positive correlation of .69409 for all accountants. In comparing the 27 groups on the chart, no exceptions are found to the rule that the more public experience, the higher is the salary.

It must be emphasized that these indications of the dominance of experience factors in determining salaries do not justify the conclusion that it is dangerous for prospective accountants to study accounting, for it is likely that those who enter professional accountancy without any technical training are exceptionally able men or are especially adapted personally to its needs. The reader will interpret the facts presented in keeping with his own acquaintance with the practicing profession and of the conditions surrounding educational preparation for it. Even if it be concluded that those who set salaries do not value such courses highly now, some comfort may be taken in recalling that many principals of firms today were trained by the apprentice method, and as former college men become dominant in the profession, properly trained accountants may receive the preference now accorded university-trained men in law and medicine.

In conclusion, the writer ventures to suggest that any actual findings of the present study in the Chicago area, whether as to the extent to which educational influences pervade the profession or as to their effect upon professional advancement, are of less significance than the proof implicit in the modest success of this "pioneer" effort, that professional aspects of accounting personnel can be investigated and dealt with both by the case study method and statistically. There are now grounds for belief that such a study might be carried out on a national scale by the Association in coöperation with member representatives in universities in each state, and preferably with the sponsorship of the American Society of Certified Public Acountants and the American Institute of Accountants. If, by a national survey, such data were secured from thousands instead of hundreds of men trying to rise in the profession, as could be done, the findings of the survey would doubtless become the basis of conference and action by the sponsoring societies representing practitioners and ourselves. From this might come some order out of the chaos now found in the induction of the oncoming generation into the profession, to the benefit of both the employer and the employee, in addition to providing a factual foundation for the work of the teaching side of the profession.

The Accounting Review

EDITORIALS

SOCIAL SIGNIFICANCE OF ACCOUNTING

After analyzing several thousand cases of bankruptcy, Prof. W. O. Douglas of the Yale law faculty finds that in 90 per cent of the failures studied no books of account were kept; in a list of six things which most frequently lead to bankruptcy he places first, "failure to keep proper books of account," and second, "neglect in applying bookkeeping facts."

Usually one is inclined to relate the purpose of bookkeeping and accounting to the individual business enterprise. But here is a plain indication that the effect of poor bookkeeping extends far beyond the individual. Good bookkeeping, it seems, must be of some concern to society since the lack of it is so definitely associated with the great losses which attend bankruptcies.

Accounting is utilized as one means of exercising social control, that is, control by the government or by governmental agencies over institutions touched with a public interest. The right to inspect the accounts of private business enterprises is illustrative of this point. Bank examining is organized in the public interest, the audits being made for the protection of the depositors. Through the field audits of the Income Tax Bureau and the Bureau's accounting regulations, the Federal Government exercises an indirect control over numerous accounting policies. Another illustration is found in the power to prescribe uniform accounts. The Interstate Commerce Commission has for many years prescribed the details of railroad accounting methods and has recently extended its requirements in regard to depreciation accounting. In a like manner, various state public utility commissions require uniform accounting reports in the interest of more effective public regulation of rates.

Accounting is of almost inestimable value in making competition intelligent; the greatest benefit from good cost accounting is the sensible price-making which it encourages—not prices consisting merely of cost plus a percentage for profit, but prices made with minimum cost limits in mind and with unprofitable lines of goods indicated. It is largely through cost accounting that business has been able to measure the definite effect upon cost (and prices) of spreading overhead expense over an increased volume of production. Large scale production is not merely quantity production but quantity production at lower prices. Machinery is used more for the reason that it keeps unit costs low than because it turns out production in mass. Low prices and high wages most certainly contribute to social welfare; and because accounting is the gauge by which costs are measured in their relation to wages and prices, accounting may be said to contribute definitely to the final result.

Accounting aids business competition to be more intelligent by fostering the use of financial and production budgets. It can be made of considerable value in the direction of stabilization in times of excessive inflation because it provides an organized means of reflecting the results of extreme fluctuations of prices upon an enterprise.

Accounting also aids in the protection of the investor and in the preservation of accumulated capital. It needs no argument to show that credit can be extended with more confidence when the lender is given a financial statement based upon good accounting, a statement which is perhaps cer-

tified by a professional auditor. The primary purpose which lay behind the British legislation in the nineteenth century requiring the appointment of auditors for every company was the protection of the shareholding investors against fraudulent promotions and directors' mismanagement. Parliament could hardly be said to have had any motives for such statutes other than the public welfare.

Accounting is not merely the proprietor's calculation of his profit. It is more. It is also one of the most effective instruments yet developed for accomplishing smoothly many of the social purposes of a money economy.

MODERNIZING CERTIFICATES In these columns of the June issue of the REVIEW, a simplification of accountants' certificates was urged. For a good many years the editor has been convinced that "we hereby certify, in our opinion" is an absurd grotesquery inherited from those earlier generations of accountants who spoke in terms intended to keep the world adequately mystified. Four years ago in a textbook the editor similarly expressed himself.

It is gratifying to find these sentiments echoed by the editor of *The Journal of Accountancy* in the August issue of that publication. But at the same time it is distressing to observe what further recommendations the *Journal* makes. Its suggested certificate follows:

> I or we, the accountant or accountants, have examined the records of the company both in the books and elsewhere and as a result of our investigation we believe that the condition of affairs of the company is correctly shown in the accompanying statements.

To include the name of the auditor in the body of the certificate is an unnecessary pleonasm—as is also the phrase "as a result of our investigation." Moreover the phrase quoted offers a potential shield to the adroit auditor who would insist that the meaning was "subject to the limitations of our investigation." Either the reference to the examination should be omitted entirely or it should not be subordinated to the "certificate" proper. If it is desirable in a certificate to indicate that an examination of the books was made—as a prelude to the rendering of an opinion of the accuracy of financial statements—it would be pertinent to state the scope of the audit. Certainly such general terms as "examination" and "investigation" need further defining before they are used to indicate what an auditor has done. Until such definition has been agreed upon, or until such time as a generally acceptable classification of accountancy services has been promulgated, reference to the nature of the auditor's activities might well be omitted altogether.

"Records of the company both in the books and elsewhere" is a curious expression the last six words of which constitute another questionable pleonasm. In the everyday language of the auditor, the "records" *are* the books of account, documents and files. The reader of the certificate has the right to expect a term to be all-inclusive if it is not explicitly limited; there would seem to be no need of telling him the obvious. Besides, the auditor, for a portion of his information, goes beyond the records of the company during the course of his examination; if he did not do so, he would undoubtedly be guilty of negligence. Perhaps it was meant that the auditor has made some of his customary verifications "elsewhere" than in the records, but the language used falls short of saying so.

"Condition of affairs" apparently is meant to convey the idea of "balance sheet" and "statement of profit and loss"; as it stands it brings to mind "statement of affairs" and is confusing.

Further confusion arises from the omission of the name of the company or companies audited, the lack of dates, and the use of the present tense. A good many changes in financial position may have occurred between the balance-sheet date and the date of the certificate, which would demand a careful differentiation in time.

Revised in the light of the above com-

ments, the *Journal's* certificate might be made to read thus:

STATEMENT OF AUDITORS

We believe that the accompanying financial statements of the ROE MANUFACTURING COMPANY correctly set forth the financial condition of the company at June 30, 1931, and the results from operations for the year ending on that date.

JOHN DOE AND COMPANY
Certified Public Accountants

New York
August 1, 1931

It is possible that the *Journal* merely wished to convey the idea that some change was necessary. But in making the suggestion, it stumbled into far more grevious errors than most certificate forms are heir to. Worse still, the *Wall Street Journal*, a few days after the appearance of the August *Journal of Accountancy*, copied the certificate bodily into its own editorial columns, at the same time urging on accountants a simplification and clarification of their forms.

Perhaps the real fault lies in taking the *Journal* too seriously, or, better, too literally.

TERMINOLOGY FOR ACCOUNTANTS

In December, 1930, after the announcement had been made that the Terminology Committee of the American Institute of Accountants was about to publish the fruits of its labors, a letter was addressed to the Secretary of the Institute. Following are excerpts from this letter:

. . . if the Committee has continued along the lines of the definitions printed in the *Journal*, any further publication of the definitions will not redound to the credit of either the Committee or the Institute. . . . My reasons for this belief are: (1) The Committee's pronouncements can scarcely be honored by the name "definitions," so loosely are they phrased and so carelessly are the rules of good definition followed. The devising of a definition is a fine art requiring an approach of a radically different character than that exhibited by the Committee. (2) A woeful lack of correlation exists as between the definitions within a group and between groups already published. Similar terms have been defined without proper reference to each other. (3) No selection has been made: various current meanings of a single term are disclosed, together with an indiscriminate banding together of terms having or involving the same concept. Shades of meaning and fine distinctions, the nicety of which gives a real pleasure to definition-reading, are not revealed in a single instance. . . . Lacking the authority of a scholarly approach, couched in language both vague and contradictory, they cannot be regarded as authoritative by anyone. The lack of selection is so pronounced that definitions can be quoted both to prove and to disprove the same point. . . . The Committee on the Definition of Earned Surplus worked more or less at cross purposes for several years, only in the end to discover that an accounting term may and probably in most cases should be limited in its application to a single concept; that an accounting concept, which supports a number of terms, should be untainted by legalistic authority; and that the profession is receptive in the matter of definitions purged of loose connotations, notwithstanding that they may seem somewhat arbitrary. . . . It would be a pity if both the Committee on Terminology and the Institute are unable to see the opportunity and unwilling to assume the responsibility which attend the task of definition-making. Would not the results be more lasting if the Committee on Terminology could confine its efforts to a single concept at a time, and phrase definitions for the terms which the concept underlies? . . . Definition-making on the vast scale selected by or thrust on the Committee on Terminology is a prodigal and futile undertaking.

The fears which this letter expressed have been fully realized in the publication by the Institute two months ago of *Accounting Terminology*.

Just what the Institute expects to gain by ill-considered recommendations to the profession is, indeed, a cause of wonder to its staunchest adherents.

BOOK REVIEWS

National Association of Cost Accountants Year Book 1930. (New York: National Association of Cost Accountants, 1930. Pp. iv, 278. $3.)

The practitioner of accounting or student of cost accounting will find in this volume a discussion of various phases of costs which is both illuminating and interesting. Almost without exception the thirty-four speakers at the convention present their opinions and findings in clear, understandable manner, and authority is added to their statements by the varied and thorough practical experience which many of them have had.

The six sessions of the Association were devoted to as many phases of the subject of costs, each one treated by several men engaged in corporation accounting, as well as by leaders in the field of college accounting instruction. It will here be possible to refer only briefly to the major topics, with occasional, somewhat more-detailed comment on points of special interest.

The first session is devoted to the subject of Market Study and Sales Analysis. The several speakers agree that there has been relative neglect of proper distribution of selling costs, and they advocate more careful study of the problem. As to what geographical area shall be emphasized as the basis for allocating expenses, one recommends the city or county, while another finds this unsatisfactory and advocates as the best economic unit the use of an area embraced by a common newspaper circulation. A third speaker emphasizes the necessity for considering sales possibilities, rather than any political subdivision, in fixing an allocation basis, such economic coverage to be built up from population, store, motor registration, and bank deposit statistics. Still a fourth speaker makes use of a somewhat similar "marketing" area, obtained by studying transportation conditions and the purchasing habits of the people. He then recommends elimination of non-productive territory and concentration on the remaining area.

Session II involves the topic, "Selling and Distribution Costs." It is held, in general, that such costs shall be divided into (1) Selling Expenses; (2) Distribution Expenses; and (3) General and Administrative Expenses. That expense which is variable and subject to control should be allocated to particular lines in so far as possible. According to one speaker, allocation on a uniform percentage basis should be replaced by specific allocation under the following conditions: (1) Where differences in selling methods exist among various lines; (2) Where the unit value of sales orders varies considerably; (3) Where differences are found in the trade channels through which the goods move.

The items of freight and handling charges on goods in branch houses are discussed in another paper. It is held that freight on shipment of finished goods to warehouses should be added to the cost of the goods only when additional utility value results. Ordinarily, handling charges at the warehouse will represent an expense when incurred. Except in the case of seasonal businesses, the uncertainty of results makes it unwise to defer any part of such expenses to subsequent periods.

The nature and the functions of the Comptroller's Department constitutes the main topic of the third session. Says one speaker: "The work of the comptroller's department requires the combined features of Line and Staff organization." General advice and direction should come from staff officers especially qualified in such fields as auditing, standardization of methods, analysis of accounting data, forecasting, and budgeting. Directly under the comptroller, moreover, should be a line personnel to carry on the actual work of auditing general accounts, works accounts, and branches, and to prepare statistical data. A second article presents the very interesting results of a questionnaire sent to 132 large corporations. Of these, 57 have no such officer as comptroller. In 55 of the remaining cases the comptroller is a major executive, equal in rank with the secretary or treasurer, and in many instances serving also on the finance or executive committee or on the board of directors. The majority are responsible to the president or treasurer. In only 16 instances are the functions of the comptroller specifically referred to in the by-laws, usually to the extent of defining him as the chief accounting officer, and therefore in charge of all accounts and records. It is further pointed out that in a banking concern the function of the comptroller is largely to see that inefficiencies, gaps of authority, and external influences are so controlled as to minimize any harmful effects.

Session IV deals with the subject of Standard Costs: material cost variations, spoilage losses, idle time, and general burden distribution. Among the many advantages of Standard Costs are mentioned these: emphasis upon cost of performance rather than cost of product, efficiency and prevention of leaks, control of overhead and materials, and simplicity of operation. Two disadvantages are presented: substitution of estimated for actual expenditures; and inability to reflect price changes unless frequent revisions of standards are made.

In Session V, devoted to Transfer of Products between Departments and between branches, it is generally contended that such transfers should theoretically be made at cost, but that practically several factors or conditions may make it desirable to consider market value. One speaker advises that the problem be solved by using standard costs, and treating any difference as purchase gain or loss.

The question is generally characterized as one entirely of policy and expediency.

Session VI. Incentive Plans in Business. Several phases of the subject are discussed in the sixth, and last, session. Different Types of incentive plans, such as stock ownership, premiums, percentage bonuses, etc., are presented, and the general advantages resulting from their use are stressed. The relative advantages of group bonuses over individual premium plans is stated. Also, the question of what officers and men should be eligible to be included in a bonus plan is considered.

These brief comments on the 1930 convention of the National Association of Cost Accountants are hopelessly inadequate to do justice to the interesting and profitable discussions and papers. A careful study of the "Year Book" is heartily recommended to all readers, with the assurance that time so spent will be of great benefit.

CARL A. FRYXELL

The Menace of Overproduction. Scoville Hamlin. (New York: John Wiley & Sons, 1930. Pp. x + 202. $2.75.)

An indicated by its sub-title, this book considers the "cause, extent, and cure" of over production. Its nineteen chapters, following a Foreword by Stuart Chase, have been written by different individuals who are familiar with particular industries or particular aspects of the general problem. Chapters are included relating to the coal, oil, cotton textile, woolen, silk, rayon, and radio industries and to agriculture. One after another, the extent of over production or, more particularly, overcapacity in these industries is reviewed. Suggestions for dealing with the evil are interspersed, but the discussions of the problems confronting the industries are in general more instructive than the suggested cures. The more important remedial recommendations which recur throughout the book are: collection and interpretation of more data on the demand for the products of industry, greater coöperation among the competing units within an industry, and "rationalization" and long range general planning for the country as a whole. In addition to these familiar proposals, the editor elaborates a specific proposal in a concluding chapter which is unfortunately unconvincing.

There are a number of chapters in the book which are not concerned with particular industries. Of special interest is the one by Paul T. Cherington on "The Wastes Resulting from Business Operations Too Small in Scale." Other topics, to which chapters are devoted, include "America's Place in World Commerce a Century Ago and Now," "Advertising and Higher Standards of Living," "The Growth of Industrial and Financial Units," "Overproduction and Business Organization," and "Management and Overproduction."

J. L. SNIDER

The Trusts and Economic Control. Roy E. Curtis (New York: McGraw-Hill Book Company, Incorporated, 1931. Pp. vii + 525.)

The trust movement, and public concern in regard to it, seems to run in cycles, like most other economic phenomena. The hectic days of the Rooseveltian era of trust-busting have been followed by a period in which the war and post-war problems have diverted public interest and political activity into other channels.

But quite recently there has been a recrudescence of interest in the economic and political questions popularly referred to as the trust problem. The publicity that has been given the alleged Power Trust, the widespread banking consolidations, the enormous "circular" mergers in the production and marketing of food products, the rapid development of chain stores and the attacks upon them, all of these developments have again brought the perennial trust problem to the forefront as a matter of popular interest and political concern. Professor Curtis' book is a manifestation of this renewed interest. Books frankly devoted to the study of trusts have been quite rare in recent years.

"The Trusts and Economic Control" is a book of materials or readings with brief connecting links and introductory statements supplied by the compiler. Its scope is broad and comprehensive, as is indicated by the titles of the sections into which the book is divided, which are as follows: the early trust movement; development of the law relating to trusts; special issues of legal policy; administration of the law; antitrust laws of other countries; economic basis of public policy; recent concentration of control; related developments in economic control; conclusions. The historical, legal, social, and economic aspects of the problem all receive due consideration. A wide range of sources has been drawn upon for the materials. Court decisions, opinions of the Federal Trade Commission, periodical literature, the standard books in the field, have all contributed liberally to the readings. A valuable section of the book is that which deals with foreign and international cartels and combines. The coöperative movement in agriculture and merchandising, both at home and abroad, the investment trust and the diffusion of stock ownership, are treated as related developments in the field of economic control.

The author has attempted with good success to select his materials impartially and to present fairly both sides of controversial questions. The book on the whole is comprehensive and well balanced. Perhaps some may feel that the political and economic implications of the trust movement have been slighted somewhat in favor of presenting the factual and legal aspects. Those who are particularly interested in the present day problems of public utility regulation and control and of railroad consolidations will probably think those questions have not been adequately presented.

The book has a continuity and cohesiveness that is all too frequently lacking in books of readings. One gets the impression, when reading it, not of disconnected fragments but of a unified treatise. It could satisfactorily serve as a textbook in itself, as well as a book of reference or collateral readings.

VIRGIL WILLIT

Psychology in Modern Business. H. W. Hepner. (New York: Prentice-Hall, Inc., 1930. Pp. xv+728. $5.00.)

A proper evaluation of this work requires that the reader keep two facts in mind: first, that the author is attempting "to approach the problems of business psychology from the point of view of the business man," that instead of "quoting abstruse scientific journals" he has concentrated his studies "upon the penetrating writings of modern business"; and, second, that the author is attempting to cover an immense territory within the limits of one book.

As a result of the first fact one gets somewhat the impression that he is reading a business man's psychology, rather than psychology for the business man. That is, we seem to get the rough and ready "psychology" which the astute business man has formulated in the course of his life of human contacts, rather than the contribution of the professional psychologist.

In the first chapter on the "Psychological Problems of the Business Man," the author asked 500 business men to describe their problems, with a net result of 97 different problems. He then arranged these according to their relative frequency. The most common difficulty was that of remembering the names and faces of people. Least troublesome was the difficulty created by the employee who continually pads his overtime card. A further study of 1,000 people was made to learn what their greatest fears and worries were. In a mixed group of men and women, the greatest fear or worry was that of criticism by others (30 per cent); the least fear or worry was "ghosts" (1 per cent). Strange to say, or perhaps not so strange, was the fear of going to the dentist. The greatest difficulty of men was worry caused by what others might think (31 per cent), and the greatest difficulty of women was self-consciousness (35 per cent). From this extremely valuable and enlightening data on human nature the plan of the book is developed.

A section on the nature of the mental life is intended to show the motives and driving forces that make people what they are. This is perhaps the most valuable portion of the book. It shows up normal human personality by exhibiting the characteristics of the abnormal, exaggeration making the traits more obvious. The reviewer senses a certain danger in presenting to the layman a brief survey of the various abnormalities, such as hysterias, psychoasthenias, phobias, obsessions, perversions, etc., even for the purpose of explaining the normal. The temptation is to classify our employees and associates under these convenient heads. The danger is increased in another chapter by suggesting methods of treating these ailments. If the abnormal conditions are present, they need to be treated with the utmost skill.

The second and third parts of the book deal with the prediction and control of the behavior of the individual, and involve principally vocational psychology. Methods of hiring and promoting employees, the choice of a vocation, etc., are discussed. There is also included some material on the increase of one's personal efficiency, improving the memory, using time properly, getting rid of troublesome salesmen, and a chapter on the psychology of salesmanship. The material is good and it is made appetizing by the frequent use of stories and anecdotes. The treatment of these topics is necessarily superficial—perhaps the interest thus aroused will stimulate a more thorough investigation of them.

In Parts IV and V, which are devoted to the prediction and control of group behavior, the bulk of the 181 pages is devoted to two sets of problems, namely, advertising, and the supervision of employee groups—men and women. In attempting to draw a picture of the employee, the author has presented some very useful material which shows a real appreciation of the psychological problems of labor. Rather more space is devoted to a discussion of sex differences than the needs of the case require, especially since consideration of other important topics had to be so seriously curtailed.

The most concretely serviceable material appears in Part VI, which is concerned with research methods in business. A series of five rules is offered for the conduct of a research project, with a very brief elaboration of each. They are: a clear statement of the problem, selection of competent investigators, proper methods of securing the data, a proper attitude toward the research, and the proper allotment of time for the research. Similarly, nine guides in the analysis of a research are offered; among which are: attention to the unit of measure, authenticity of the data, and significance of the findings. Six rules are offered for obtaining the data. The questionnaire is favored as a method for investigation, although two pages are devoted to the personal interview.

The final chapter furnishes the "phychological research tools." These are rather statistical tools, as they are the customary methods of measuring central tendency, variation, error, and relationship. The chapter is fortunately placed at the end of the book, so that it can be omitted without breaking the continuity of the plan. The reviewer predicts that it will be omitted by the majority of readers. Not only is it out of line with the general tone of the rest of the book, but it presents material

which the student in a college class grasps with difficulty. If the reader already understands statistics he will not need the chapter, and if he does not, he can scarcely hope to do so from this brief presentation.

There are numerous errors throughout the text which may puzzle the lay reader, as on page 268 where "the square peg and the round hole idea is an erroneous simile." These are merely accidents in the preparation and proof reading of such a large volume, and will doubtless be eliminated in subsequent printings. On the whole, the book is interesting and useful as an introduction to the pressing human problems of business and industry. What shortcomings there are may be attributed to the fact that the author chose to cut a wide swath through fields that invite an intensive cultivation.

Albert T. Poffenberger

Accounting and Cost Finding for the Chemical Industries. George A. Prochazka, Jr. (McGraw-Hill Book Co., Inc., New York, 1928. Pp. 242. $3.00.)

The literature dealing with cost accounting for specific industries grows steadily, and our old ideas of one or two hard and fast systems to be applied alike to all industries are fading more and more into the background. The present work has been prepared, by a man who has had fourteen years of experience in the field, to show what has been done and can be done in the application of cost accounting to the chemical industries. The general lines of treatment may best be indicated by the titles to the five main parts of the book, namely, Cost Accounting Prerequisites, Determining Process Costs, Determining Material Costs, The Results, and Fixed Property.

The author opens his work by attacking the common fondness for "actual article costs," or specific costs of specific products. It is a natural tendency for any one to prefer figures described by the prepossessing title "actual costs" until it is found that these actual costs are only of momentary significance and include all sorts of incidental vagaries which in no way reflect permanent or long-time conditions. Thus the author prepares the way for his fundamental treatment, which is the preparation of process costs for the chemical industry, and the application to these process costs of standard cost principles. He states early that the greatest difficulties occur in the process costs—which means labor and burden—and that there is relatively less difficulty with the material costs. He accordingly keeps material costs separate from process costs throughout his treatment, a practice which naturally makes for clarity in the results. His emphasis upon the importance of the departmental organization, and of the necessity of building the cost records around this organization, is also timely. The table of General Ledger Accounts (page 32) is doubtless arranged alphabetically and numbered in that order to facilitate subsequent reference to specific accounts; but in spite of this advantage there is much to be said for a classification of these accounts on the basis of their position in the balance sheet and income statement. This is a matter which is not the same in all industries, and it is helpful to receive guidance on this matter from experts within the industry. This guidance, however, is largely supplied by the subsequent balance sheet and income statement reports. A good deal of the treatment is given in the form of illustrative problems, which makes it clear and practical.

In the chapter on process costs, where standard costs are discussed, it would be of interest if there could be a little further discussion of the basis for the determination of standard burden rates, especially as related to the volume of production and the percentage of capacity operation prevalent in the chemical industry. The matter also of joint costs, so characteristic of the chemical industries, is dismissed with a brief statement to the effect that an empirical apportionment based on quantitative yields and market values is the acceptable solution; discussion of one or two typical cases would have been very helpful in visualizing the problem as seen in these industries, as compared, for example, with oil refining, meat packing, or corn products.

Chapter VI, Recording Departmental Activities, is an excellent presentation of the sources of cost data for the accounts; it is in this chapter perhaps that the conditions peculiar to the chemical industry are most clearly brought out. Provision is made throughout for tying-in the cost records with the general ledger accounts, and also for bringing out the results in proper executive reports, including those which present the variations from standard. Plant ledger records are recommended for the industry, and some of its difficulties with depreciation are discussed.

T. H. Sanders

American Monetary and Banking Policies. George W. Dowrie. (New York: Longmans, Green & Company, 1930. Pp. 401. $3.00.)

The twelve chapters of Professor Dowrie's book appear to form four main groups of which the first includes three chapters which define "policies" and analyze their internal and external application. Chapter IV is a transition chapter relating to regulation while Chapters V-VII relate to central banking. Chapters VIII-X take up the gold standard and central banking in its relation to stabilization of prices. Here there is also included an exceptionally valuable chapter under the title "Policies relating to our circulation money." Finally, there are Chapters XI-XII which consider monetary and banking policy with respect to spe-

cific groups and international relationships. Each chapter is conveniently arranged into subdivisions and is followed by a very helpful bibliographical note.

The plan of the book as worked out by the author "has been (i) to trace briefly the roots of the policy or tendency in question, (ii) to ascertain its real nature and status, and (iii) to inquire into its actual or probable effect upon our economic structure." The problems treated arise chiefly from American experience, though foreign experience has been utilized effectively here and there. It is evident that Professor Dowrie had in mind the university student "who should have a definite interest in the policies and tendencies which characterize our present financial organization." It seems to be his feeling that a study of policies should follow a study of general structure and functions because of the social significance of the former. Policies include tendencies, and both should be examined from the standpoint of "social desirability." In taking this position Professor Dowrie is profoundly correct. There has been too much of a tendency to "commercialize" the university instruction in money and banking. The professional motive has been stressed at the expense of the cultural; the pecuniary test has been permitted to smother the test of social serviceability. Professor Dowrie has written a book which places the emphasis just where it belongs and for that reason the volume fits in admirably at the conclusion of a year's work in beginning money and banking. The book assembles, analyzes and appraises the outstanding events of our monetary and banking history which should have been the fruit of policy. Whether they were or were not, Professor Dowrie makes sufficiently clear the nature of the creative forces that account for practises that are sometimes entitled to be described as policies and sometimes by a term of lesser dignity.

In any event, Professor Dowrie has performed a valuable service to all teachers of money and banking; there has long been a need for a book of the kind which he has written. But it must be said that one cannot fully accept all of his statements. Thus, we have his contention (page 16) that the McFadden Act "not only seems to have removed the causes for numerous voluntary liquidations among national banks, but to have provided enticing bait to state banks to convert into national associations." The course of events since the enactment of this measure has not justified the hope that it would bolster the national system. The evils growing out of the competition of two types of banking comprising forty-nine systems are too deeply rooted for cure by any such half-way measure. Likewise, the position (page 190) that collateral loans by reserve banks to members banks "is not likely to be abused again, unless the United States becomes involved in another great war" is most debatable. United States bonds constitute acceptable collateral, but they are only remotely connected with operations which are essentially commercial in character. They may, however, make up for a lack of eligible paper and thus serve to complicate the problem of control of credit. But Professor Dowrie does well (page 200) to call attention to deficiencies of a system of rediscounting based upon the promissory note which, by its very nature, conceals the purposes for which the credit originated. But if the note is objectionable for this reason, what is one to say in behalf of the bond?

Again, the statement (page 231) "that an ideal monetary system would provide us with a unit of measuring values which would be as unvarying as the official yard stick and the gallon measure," appears to clash with the position of Professor Bradford in the excellent companion volume, *Money,* (page 375-6) thus imposing upon the instructor the task of harmonizing the statements. Also, the statement (page 242) that "the world's gold supply is tending to redistribute itself in something like pre-war fashion" is at least debatable in the light of events since this book was published. Professor Dowrie admits (page 283) that "there is no effective way in which the Reserve System can strike a blow at excessive brokers' loans without dealing a like blow at business." Thus he recognizes the clash between the processes of industry and the processes of business for which there can be no remedy that the Federal Reserve System can apply. With this position one cannot disagree, but it is more difficult to accept his view (page 324) that the farmer "has virtually ceased to look to further credit legislation as a way out of his difficulties." In view of the enactment of the Agriculture Marketing Act of June 15, 1929, one is reluctant to accept the statement or to become optimistic about the future.

Should Professor Dowrie find opportunity to revise and amend this volume from time to time, it will doubtless long perform an excellent service in American universities and colleges.

E. A. Kincaid

Economic and Social Problems of the Machine Age. Arthur Bruce Anthony. (Los Angeles: Semicentennial Publications of the University of Southern California. University of Southern California Press. 1930. Pp. ix, 82. Paper, $1.00. Cloth, $1.50.)

Professor Anthony's work, as indicated by its title, has as its objective the presentation of a number of the most important problems directly or indirectly traceable to the continuous change from hand to machine labor. Analysis is made from the standpoint of social welfare, and although it is not the author's intent to offer solutions to the problems presented, constructive suggestions are frequently made as to the lines along which an approach to a proper solution may be effected. So

vital are the questions raised—particularly at this time—that this study should be of extremely broad interest.

After pointing out increased quantity, improved quality (in some cases), and increased variety of product as contributions of the machine age to social welfare, Professor Anthony turns to some of the problems arising from the industrial revolution. First considered are labor indiscipline, labor government, and the safeguarding of labor's working conditions as links in the chain of cause and effect emanating from large capital investment in and the consequent separation of the worker from ownership of the tools of production.

In Chapter II, Professor Anthony points out problems incident to industrial depressions, the question of the labor wage, and the danger to democracy as all arising from the abuse of the authority concentrated in the hands of capitalists through ownership of the tools of production. He also stresses the problem of large-scale output: the necessity of gaining full utilization of machinery as its cause, and the great and growing demand for raw materials, problems of exploitation, conservation, and reclamation, and government regulation of private enterprise as its effects. Chapter III amplifies large-scale production considerations to include problems arising out of industrial combinations and monopoly and the effect they have upon social opportunity.

In Chapter IV, after bringing out certain aspects of the problem of maintaining consumer buying power, Professor Anthony turns his attention to some of the defects of our modern financial structure by outlining such problems as concentration of financial control and imperfect distribution of productive energy. Further analysis along this line is made in Chapter V wherein the economic effects of changes in the price level are presented as another problem connected with the modern mechanism of exchange. This problem is discussed in relation to six factors: debtor and creditor relations, social efficiency of the economic system, the standard of living, international debtor and creditor relationships, the business cycle, and domestic politics.

Returning to labor problems, Professor Anthony in Chapter VI analyzes the defects in socialist theory and practice, and refutes the "one class" ideal by a presentation of the various distinct lines of cleavage of interest in the working class itself. This leads into a further discussion of government regulation with particular emphasis upon the problem as to the system of government "best adapted to the work of regulating those phases of the modern economic order which need such supervision."

Chapter VII is concerned with the difficulties incident to the intense international rivalry for raw materials, markets, and capital investment opportunities, and the additional problems developing from the principle of vested interests in foreign properties. Chapter VIII gives a brief summary of the major problems considered and concludes with a presentation of possible lines along which economic development may be expected to proceed in the future.

The clear treatment and natural sequence of thought with which Professor Anthony attacks the unravelling of the most complicated interrelationships merit special comment. Throughout the text, references to standard works for collateral reading are made. An annotated bibliography and an index to the subject matter are appended.

JOSEPH A. UHL

Fraud: Its Control Through Accounts. George E. Bennett. (New York: The Century Company. 1930. Pp. ix, 135. $1.50.)

Professor Bennett's work, published under the auspices of the American Institute of Accountants, is concerned not so much with the detection as with the prevention of fraud in its various forms. To this end emphasis is placed upon the methods necessary to secure a proper internal check through division of work in the average business organization. A careful tracing of the usual and ordinary transactions of a business through the accounts indicates situations wherein the greatest possibility for fraudulent practice exists. Consequently, as well as being instructive to the student of accountancy, the book should be of broad interest and considerable assistance to the professional auditor, the internal auditor, and the business manager in the audit of accounts, the installation or correction of accounting systems, or the supervision of the operation of an accounting system.

The book is divided into three parts. Part I, in furnishing a general background for later, more detailed discussion, is composed of five chapters dealing respectively with internal check in relation to fraud and accounting errors of various types; legal distinctions characterizing the various types of fraud from one another; limitations in the application of internal check principles by virtue of the particular classification of fraud, the existence of collusion, or the lack of adaptation of the accounting system to the circumstances of the particular case; principle of charge and discharge and the application of the principle through various accounts to present personal accountability and discharge of responsibility for incoming and outgoing values; and organization and business transactions as determining factors in the development of a system that will obtain a natural, automatic internal check through a proper division of duties among employees.

In Chapter V under Part I, Professor Bennett classifies all financial transactions and business activities into five major groups: Purchases and Purchases Returns; Sales and Sales Returns; Cash Disbursements and Cancellation of Payments;

Cash Receipts; and Departmental Interrelations. Part II, consisting of seven chapters, is devoted to a detailed treatment of internal-check principles and aims to be accomplished in the handling of various business transactions. The discussion of the subject matter closely follows the above suggested classification of activities and transactions. Two additional chapters are included under the treatment of cash transactions; one prefaces the separate discussions of cash receipts and of cash disbursements by some general comments upon the subject; the other gives separate consideration to payrolls as a particularly important part of cash disbursements.

Throughout Part II the successive steps of each type of transaction from inception to completion are traced through the records and carefully analyzed with particular emphasis being placed upon such division of duties and delegation of authority as to reduce the possibility of fraud to a minimum. At all times is recognition given to the varying conditions which may hold forth and factors which must be taken into consideration in the small as opposed to the large business, as well as to the variations in procedure which may become necessary because of the particular circumstances of the individual case. Free use is made of concrete cases to illustrate common procedures in different types of businesses. Attention is continually directed to those points in the handling of transactions where fraudulent practice is most likely to occur, to the usual methods by which fraud is perpetrated, and to the tests and devices that are of material assistance in detecting it.

Part III is devoted to the presentation of a bibliography of books and articles appearing in periodicals, a list of legal cases, and a selected list of forty review questions and problems bearing upon the subject matter and designed to represent "what a person should be able to do as a minimum in order to pass this phase of the subject in professional examinations, and in order to have a solid foundation for professional accounting practice."

Professor Bennett presents his material in a clear and comprehensive manner. His concise, direct style assures continuous interest on the part of the reader. At the conclusion of certain chapters, where pertinent, a short list of references to standard works is given for collateral reading. The subject matter is conveniently indexed.

Joseph A. Uhl

Introduction to Accounting. Alva L. Prickett and R. Merrill Mikesell. (New York: The Macmillan Company. 1930. Pp. xxiv, 362. $1.75.)

Most teachers of accounting will agree, I believe, that the teaching of beginners is by no means an easy task. Frequently, the students' lack of previous training in mathematics, especially business arithmetic, and a wide diversity of interests among students in the same classroom, ranging from the general and cultural to the highly specialized interests of accounting majors, create pedagogical problems that call for much ingenuity and patience on the part of even the best instructor. When the situation is aggravated by the use of a poorly written textbook, the difficulty of the problems is intensified to a very marked degree.

For this reason, whenever a new text on elementary accounting makes its appearance, its content and method of presentation are rather critically examined by teachers with the hope that the new text embodies features that will facilitate instruction, either by following a more natural and logical sequence of material, or by including more practical and more interesting problems. Even teachers of advanced accounting manifest considerable interest in a newly released elementary text, because they find that some students in advanced classes did not receive thorough training in the required course of the first year. Anything in the way of improved text material, therefore, is welcomed by teachers of advanced accounting.

Such difficulties were, no doubt, encountered by the authors of "Introduction to Accounting," in their experience as teachers, and as a result they set themselves to the task of preparing a course "which would present the essentials of accounting to those students who are interested in the subject only for its general relation to business, but which would also provide the necessary foundation for a major in accounting," as stated explicitly in the Preface by Professors Prickett and Mikesell.

With this objective in mind, the authors have preferred to emphasize principles rather than methods. It may be added, however, that mechanical methods are not neglected. Instead, an unusual amount of minute detail is included. For example, relatively minor matters, having to do with the omission of the dollar sign and the decimal point in ruled columns, and the use of a short straight line in the absence of cents in the cents columns, matters which are usually omitted entirely by other authors, are explained in most painstaking detail on page 55. In a similar manner, on page 77, an unusual amount of detailed explanation is presented on the subject of trial-balance headings.

Students of liberal arts colleges, especially, should find the introductory chapter interesting, because of the numerous references to early uses of accounting in Greece, Italy, and other countries of Europe, and in the early days of American history. Students in colleges of commerce will probably pass over this introductory material rather hurriedly, and find in Chapters 2, 3, and 4, an easy and interesting introduction to the subject matter of accounting, because the authors have wisely chosen the balance-sheet approach. Business practices and methods are cited freely, so that the student, early in his study of accounting, be-

comes familiar with the purposes and principles of standardized accounting procedure. Thus the student is given the correct perspective, because he is allowed to see at the beginning of his study some of the ulterior objectives of accounting practice. The forms and purposes of the balance sheet and profit and loss statement are presented in an unusually simple manner.

In Chapters 5 to 17 the student is led step by step from the financial statements all the way back to the original business papers and documents from which entries are made in the books of account. The procedure is first from statements to the ledger, from which the statements are derived; then from the ledger to the journal, from which entries are transferred to the ledger; and thirdly from the general journal to the special journals, which grow out of the general journal. Adjusting entries, working sheets, closing and post-closing entries, controlling accounts and subsidiary ledgers, columnar journals, and finally business forms and vouchers are presented with a final chapter on interest and discount. At this point, Chapter 18 provides a summary problem for solution, as a means of review and test of the student's knowledge. It might be added that at the close of each chapter are found several problems adaptable for class or home work. Chapters 19 to 24 cover the peculiarities of accounting procedure for partnerships and corporations, including numerous questions and problems based upon the discussions in the chapters.

The sequence of material seems to be for the most part satisfactory, but some instructors may object to the teaching of closing entries after adjusting entries and the working sheet have been presented. Closing entries are not explained until Chapter 13. It might have been more natural for a brief chapter on closing entries to follow the explanation of the ledger and trial balance given in Chapter 7. Moreover, Chapter 14 on controlling accounts and the subdivision of the ledger might well follow chapter 10 on special journals.

Any criticisms, however, on the matter of sequence in an elementary text on accounting, are in turn usually subject to criticisms by others. No doubt the authors adopted the sequence of the text because they found by experimentation that peculiar order to be satisfactory in the classroom. If, however, teachers who use the text prefer to follow their own sequence, rather than that of the book, that can be done without any serious difficulty by assigning later chapters earlier in the course.

It is rather refreshing to observe that the authors are unwilling, at times, to accept some of the traditional accounting terminology and practices. For example, on page 33, in explaining the cost of goods sold section of the Profit and Loss Statement, the authors substitute "Gross Margin" for the term "gross profit." "Unfortunately, customary usage has established the words 'Gross Profit' instead of 'Gross Margin.' There is in reality no profit determinable until one gets to the end of the statement. In this text in spite of custom's dictates, the more correct terminology, Gross Margin, is used." The authors are to be commended for their venturesome spirit and sincere desire to instruct beginners properly in terminology, but we question the profitability and expediency of introducing a new term, not yet sanctioned by the profession, in an elementary textbook on accounting. On page 45 the authors discuss the question again but with the apology: "The fact is emphasized again to keep before the student a truth (there is no profit except net profit) so self-evident that it fairly rushes at him, but so easy to misconstrue, that textbooks for years were in error." Likewise the term "liability" is strictly limited to outsiders' equities. ". . . if it is to retain a definite meaning in bookkeeping terminology, which at best is subject to improvement." On page 135, the authors express dissatisfaction with the terms "Reserve for Bad Accounts." Such controversial discussions might well have been omitted. On the other hand, some instructors may prefer to emphasize the need for a better accounting terminology and make valuable use of such discussions for purposes of illustrations.

The text is written well, in simple and smooth style. The accounting forms presented conform closely to standard forms used in practise. Most of the problems suggest practical situations. Some of the questions are of the memory type, but these are not excessive in number. A fairly complete index is included. The authors as well as the publishers are to be commended highly for the mechanical features, such as clear type, informative sideheadings, page balancing, etc., all of which add much to the attractiveness of the book.

The title "Introduction to Accounting" was indeed well chosen because it appears to describe adequately the contents and purpose of the book, does not in any way mislead the accounting public, and is not as formidable a title to the student, as "Elements" or "Principles" might be.

EDWIN L. THEISS

Modern Bookkeeping Practice. First and Second Year Course. Nathaniel Altholz and Anthony W. Klein. (New York: Lyons and Carnahan, 1926 and 1930. Volume I, Pp. vi-366. Volume II, Pp. xi-439. $1.60.)

This text, designed for secondary-school use, is based upon the proprietary equation, but comes nearer to the account method in its actual approach and teaching, even though the equation is consistently held up before the student. The equation is held up more as a summary of results, while account functions are used in the teaching.

The authors say, "The book is divided into les-

son units made to fit the class period," and they have done this well. They also maintain that a careful graduation and logical sequence have been constantly kept in mind in planning the succession of topics, and, except for a slight abruptness in the early part of the work, they have succeeded in this attempt. The authors go on to say that the purpose of the text is to develop habits of order and clear thinking, stimulate the student's imagination and intelligent initiative, and inculcate sound concepts and lofty ideals in business, regardless of the student's later chosen field of expression. These valuable objectives are met by the text as far as is reasonable to expect.

The handling of items such as "tore down an old partition and gave it to the janitor," in Chapter I, and "loss on sale of desk," in Chapter III, come rather too soon to be consistent with the authors' attempt at careful gradation. It seems that closing Purchases into Inventory, and then getting the new inventory on the books by the entry:

Inventory (new)
  Inventory (old)

is rather cumbersome, and far less to be desired than closing the old balance of Inventory into Purchases, and putting the new Inventory on the books by the entry:

Inventory
  Purchases

Also, the value of the practise of transferring depreciated values of supplies and equipment by such entries as:

Store Expenses (new)
  Store Expenses (old)

and

Rent (new)
  Rent (old)

is doubtful. It is also a question whether students in the early months of secondary school bookkeeping can comprehend the fact that transactions which result in losses through expense, or in profits through income, immediately affect capital, regardless of how simple it seems to the experienced teacher.

A good feature found early in the book is the use of one account for inventory and purchases, enabling the text to consider purchases as an increase in assets, with the relative rules. A good deal of valuable business discussion especially helpful to the teacher who has not had the benefit of much business experience, is included where advantageous, as, for example, the discussion of why posting should be kept up to date (Chapter VIII) and of the preparation of bank deposits (Chapter IX).

Refreshing it is to find a bookkeeping text in which the authors do not teach the old, impractical methods of finding errors when the Trial Balance is out of true, but where, as in this text, it is taught that finding such errors is a matter of hard and heady hunting. Also, the authors avoid to a considerable extent the giving of false impressions early; in discussing sales journals, for example, in one chapter are taught two different forms, with examples shown of each, and exercises for each, so that the student does not get the idea that only one form of sales book is correct, or customary.

The first year's work includes departmentalization of purchases and sales, but not expenses, and the discount columns in the cash book, and drafts.

The second-year book, Volume II, teaches control accounts with subsidiary ledgers, bound, looseleaf, and card ledgers, petty cash, deferred items, accruals, depreciation, bad debts and reserves for both open accounts and notes, working sheet, and adjusting entries. These topics are well and fully covered with painstaking detail, but especially well handled are control accounts and working sheet. The ledgers are shown in different rulings, thereby, again refraining from giving the student the false impression that only one form exists.

Business calculations are found in the second-year book, including percentages of expenses based upon net sales, stock turnover, ratio of current assets to current liabilities, and collection ratio. Partnerships and corporations are taught, with clear expositions of the administrative details as well as the accounting problems.

Short sets are plentiful all through both books, and two long sets, enough to give the impression of unity to several principles, are gathered together into one major problem.

Objective tests by Louis Braverman of the Thomas Jefferson High School, Brooklyn, and Mr. Altholz, are available, and cover a wide range of accounting principles and business routine.

HAROLD E. COWAN

Credits and Collections in Theory and Practice. Theodore Beckman. (New York: McGraw-Hill Book Company, Incorporated. 1930. Pp. xvii, 599. $4.)

The first edition of this excellent text appeared in 1924. It constituted a welcome addition to the literature on the subject at that time and now that it has been thoroughly revised and amended it is much more welcome. Professor Beckman divides his book into five parts, the first of which deals with fundamental principles, the second with sources of credit information, the third with credit department organization and management, the fourth with technical and legal aspect of collections and the fifth with credit and collection and control. The new edition includes a chapter on installment credit in Part I, a chapter on special mercantile agencies in Part II, a chapter on installment credit management in Part III, a chapter on collections in Part IV, and a chapter on credit limits in Part V. These chapters constitute valuable additions and expansions which experi-

ence with the book and passing events made both desirable and necessary.

In view of the growing importance of credit transactions of all kinds it is not surprising that courses in credit and in credit and collections have found places in the curricula of many collegiate schools of commerce. Professor Beckman's book is eminently fitted for a text in such courses. One may doubt the wisdom of undergraduate training in collections in view of the fact that an efficient collector must have rare qualities of judgment, but there can be no doubt that this part of the book is highly valuable to business men and it must be kept in mind that Professor Beckman had both business men and students in mind when he prepared his text.

From the point of view of collegiate instruction in finance, Professor Beckman's book performs a distinct service. There can be no question that adequate instruction in a course in banking necessitates inclusion of material relating to the analysis of borrowers' statements. Bank loans are increasingly based upon data afforded by such statements and the practice is growing, rather slowly to be sure, but it is growing even among small banks. The best approach to the famous Three Cs is by way of an adequate financial statement and students should be instructed from this point of view. Professor Beckman has included three excellent chapters on business statements and their analysis, material which might very well be included in any text on banking. Since this material is not often found in texts on banking, Professor Beckman's book constitutes a valuable reference book on this and related subjects.

One or two exceptions to his treatment may be noted in passing. At page 257-258 he includes intangibles among fixed assets, a practice which does not appear to be desirable. A separate classification has much to recommend it. Again, at page 261, he fails to refer to the desirability of including in the balance sheet evidence that accounts receivable have been assigned. At page 284, in referring to the ratio of sales to merchandise, he states that "to secure this ratio, divide the net sales by the total merchandise inventory." It seems obvious that the true ratio can only be ascertained by taking the net sales at cost, assuming that the inventory is carried at cost. The treatment of installment credit leaves something to be desired from a purely economic point of view. It appears to the writer that insufficient stress has been placed upon the fact that much installment buying adds nothing whatever to the power of the buyer to meet his payments. The credit is often extended without consideration of the productive power of the goods which are purchased and right here the line between desirable and undesirable installment credit should be drawn. Not that no such sales should be made when the goods add nothing to the power of the buyer to make the payments, but that the absence of this element should be noted in every case. Without doubt much of the present depression arises from the loss of purchasing power for current production because of goods purchased previously under this plan. There has been too much living on a deferred basis with a growing tendency of buyers to feel that there is some way to eat their cake and have it too. This section of the book is very well done, but much would be added to the value of the book, if the approach were less a purely business and more a social one. Perhaps the latter approach was not taken because the book is intended for business men among others. However, it might be said that they are most in need of this very approach.

Professor Beckman has included with each chapter a select list of references to other treatises and he has also included some very helpful questions. A few short problems would have been a welcome feature along with the questions. The text is well set up in type that is clear and sufficiently large. There are also two valuable appendices and an adequate index.

E. A. Kincaid

Economics of Accountancy. John B. Canning. (New York: The Ronald Press Company. 1929. Pp. viii, 367. $5.)

In this book the author reports the results of a study of accounting theory and practice from the point of view of the professional student of economics. Unfortunately, your reviewer is so well aware of the differences among his fellow economists that he does not know what *the* viewpoint of the professional student of economics is. For the author it is the point of view of the student of economic statistics and of a follower of Professor Irving Fisher. (Professor Fisher has written a highly eulogistic account of the book in *The American Economic Review* for December, 1930). Other theories than Professor Fisher's are dismissed with distain (p. 41 n.) or relegated to the "scrap heap" (p. 333). The author has three main purposes: to equip the economist with safeguards against improper use of statistical data taken from accounts; to enrich accounting theory by Professor Fisher's income concept, the flow of services; and to improve accounting definitions and procedures. He has undertaken a difficult task in addressing so heterogeneous an audience on so many topics, a pioneering venture in a rocky borderland.

The author treats accounting theory from one basic viewpoint, the theory of income. This basic emphasis appears most clearly in his discussion of assets and of gross and net income. The book is divided into fifteen chapters with the following principal topics: assets, liabilities and net proprietorship, income, valuation. The whole range of accounting theory, except cost accounting, is touched.

No student of economic and business statistics can afford to remain unaware of the dangers of using the figures in balance sheets and income

statements for other purposes than the original ones. He certainly should not condemn the accountants for not devoting themselves entirely to his problems. On these subjects such a student will find in this book much of significance; he would have welcomed a discussion of standardization and comparability.

For accounting theory, the first influence of Professor Fisher's ideas is in the author's definition of assets: "An asset is any future service in money or any future service convertible into money . . . the beneficial interest in which is legally or equitably secured to some person or set of persons" (p. 22). With this definition he concludes that insurance prepayments and organization expenses are not separate items, but valuation accounts. Good will is the master valuation account, it recognizes that the whole may be greater or less than the sum of its parts, that all the assets *together* may have a significance different from the sum of each taken separately. No one has been able to suggest a better method of valuing good will than capitalizing excess earnings (p. 300), so, unfortunately, the economic statistician will always find the rate of earnings to be the one assumed. The problem of the economic statistician is not the same as that of the accountant. The accountant, in valuing the good will of one enterprise, may capitalize the earning power at a rate assumed to be typical of the industry. But the economist, interested in comparing the profitableness of one enterprise with another or ascertaining the rate typical of the industry, cannot assume a typical rate without falling into circular reasoning.

The theory of assets is tied in with the definition of income, so closely that the author almost defines assets in terms of income and income in terms of assets. "Ultimate total income is the final fruition in money both of the enterprise assets and of those other services not listed as assets that prove to have the economic attributes of assets" (p. 95). Later illustrations make it clear that income is the fruition in excess of the principal. All measures of income for periods less than the total lapse of time during a relationship are approximate indexes only (p. 124). The author then turns to the difficult subject of valuation, and escapes the trap of determining the principal by discounting the receipts at some assumed rate of discount. Inventories he would have valued by the "direct method," by using three aggregates, "cost, market, and net selling value to yield some named rate upon the investment" (p. 221). The valuation of capital assets is highly complex. Accountants are properly sceptical of valuation bases other than original cost (p. 254). For the revaluation of fixed assets the author suggests a method of depreciation based on units of service.

In the reviewer's judgment, the most stimulating suggestion for the accountant is to look to the future income as much as possible. In the valuation of accounts receivable, the accountant has long made an allowance for possible bad debts. The author suggests that an analogous method be used wherever possible, that an attempt be made to make separate specific estimates for specific contingencies.

The appreciation of a pioneering work is always difficult and uncertain, and never unanimous. Professor Canning's work is certainly provocative.

R. S. MERIAM

Mortality in Retail Trade. Bureau of Business and Social Research. (Buffalo: University of Buffalo. 1930. Pp. xix, 198. $3.)

Mortality in Retail Trade is "a statistical analysis of entrances into and exits from the retail grocery, drug, hardware, and shoe trades in Buffalo by independent retailers over the period 1918-1928, with special reference to the grocery trade." It is the aim of Dr. McGarry, through this statistical study to determine the causes of failure by small retailers and to suggest how the number of failures may be reduced.

Dr. McGarry's presentation may be divided into four parts: first, the nature of the statistics used, second, the reasons for entrance into retailing, third, reasons for withdrawals, and fourth, conclusions. These will be considered in the order listed.

The original data for the study were taken from the classified list of the retail stores in the annual directories of the city of Buffalo. The entrance of a store into retailing was determined by the appearance of store names in a directory which did not appear in the previous year and an exit was recorded when a store name appearing in one directory did not appear in the directory for the following year. These basic data were supplemented by a large number of interviews with retailers, ex-retailers, and consumers, which, however, have served more as a background for analysis than as a basis for statistical tabulation.

Dr. McGarry has carefully pointed out the limitations of the data which he uses and has wisely refrained from subjecting the data to more than elementary statistical analysis. He has summarized his results as follows: "Of the total number of stores listed in each of these four trades, 13.8 per cent of the grocery stores, and 26.8 per cent of the drug stores, 29.8 per cent of the hardware stores, and 26.8 per cent of the stores have been listed for more than ten years.

"The median life for grocery stores is about three years, while that of store in each of the other three groups is about six years."

The treatment of the sections on reasons for entrance and withdrawal from retailing is largely speculative. Why do people go into retailing? The theories presented are not particularly complimentary to the typical newcomer in the retail field. He becomes a retailer because it is the economic path of least resistance. He leaves retailing for retire-

ment, for a better job, or because his capital is nearing depletion, and a majority of the exits from retailing are for the latter reason. Chain stores, Dr. McGarry concludes, have not increased the mortality among independent stores, but have decreased the number who are entering retailing as independent merchants.

The economic consequence of easy and haphazard entrance into retailing by many who are sure to leave retailing poorer but "wiser" men is waste in distribution. There is waste to the wholesaler in losses from bad debts, waste to the retailer in the depletion of his capital and economic waste in useless efforts of incompetent retailers who are perhaps better fitted for other work in our economic life. Unfortunately, Dr. McGarry has no specific recommendations other than education. In the last paragraph of the last chapter he rather cautiously suggests education as a method of alleviating the situation but the idea is not developed. "The real remedy," states Dr. McGarry, "seems to lie in education—not merely in the education of the retailer in the methods of conducting a business, effective as that may be, but education of wholesalers and manufacturers as to the most economical outlets for their goods. Education of the general public as to the hazards involved in the retail trades would also serve as a deterent to reckless entrance into them. Such education must be based upon a more extended analysis of facts than is now available. The Louisville Survey and the Census of Distribution have done much to throw light upon general problems of which little was known before; and it is hoped that the present study may suggest new and further lines of inquiry."

Mortality in Retail Trade is well written, has a large number of tables and charts and an excellent bibliography. In the appendix are two supplementary studies. The first is an analysis of the distribution of independent stores in Buffalo according to their credit rating. These data are presented without comment. The second is a study of the relationship between the grocery stores per 1,000 inhabitants, the proportion of chain grocery stores to all grocery stores, and the mortality rates in 1928, by wards, as determined by partial correlation. The data for this study is inadequate and it is presented by the author "as a type of analysis which under different conditions might produce significant results."

EDGAR H. GAULT

A Solution to the Appreciation Problem. William B. Castenholz. (Chicago: La Salle Extension University. 1931. Pp. iii, 95. $1.00)

The appreciation problem, as such, is no more. In some sixty pages, the author of this booklet has contributed a solution to this "much debated subject" on which, according to the publisher's blurb, "a well-known C.P.A." leaves "nothing more to be said." The "loose thinking" which the author opines has characterized all previous discussions of the question by accountants has now been swept aside by this genesis of accounting logic. If the word of the publisher can be relied on, here is an idea that will "revolutionize accounting thought."

The author prefaces his argument with the premise that all methods which have been advanced for consideration of appreciation are open to criticism and that the "more intelligent treatment of value changes" which he propounds "should satisfy all groups." Having thus established the importance which he assigns to his "solution," he seizes his pen and with the fervor of a political pamphleteer, rides forth to battle against the "absurdities" and "ludicrous expressions" that lurk in financial statements prepared by accountants who "adhere strictly to the ultraconservative doctrine" of past cost.

Monetary values are constantly changing, the author points out, and should be recognized in determining current costs of operation. Failure to do so in computing the depreciation of fixed assets is responsible for the confused, non-comparable basis upon which industry now operates, and prevents the "recovery of present monetary values through cost." The technical machinery proposed, by which the suffering of industry is to be alleviated, is as simple as transferring the change from your right-hand pocket into your left and then journalizing it back into the pocket whence it came.

The first step in the "solution" involves periodic appraisals of the current value of service units remaining in each fixed asset. Should the appraisal reflect a greater value than that shown on the books, the excess, divided by the number of years of remaining life, is charged at the beginning of the fiscal year to prepaid expenses and credited to unearned appreciation; from prepaid expenses it is absorbed monthly into cost of manufacture. The unearned appreciation at the close of the year is added to earned surplus. Very simple! Right pocket, left pocket, and back again. And the "solution" achieves the all-important end of introducing present monetary values into costs without offense to those old-fashioned accountants who object to the reflection of appreciated values in balance-sheet totals.

Upon the mortgaging of unincumbered improved property which has enhanced greatly in worth, the author is "inclined to suggest" that earned surplus be credited with a portion of the appreciation on the theory that the equity sold has been converted into working capital available for other purposes. One wonders whether the author would hesitate to pay a cash dividend out of the earned surplus thus created, and whether he would discount the necessity of controlling the application of the proceeds for the present and future protection of the mortgage holder. Fortunately, the author indicates some doubt of the general acceptance of his plan.

In conclusion, the author offers several suggestions for handling appreciation, indites a panegyric for the service rendered to industry by the appraiser, chides Justice Brandeis for making "weak" analogies to industrial and business practices in the Baltimore street railways case, and adds under the sub-title of "This Thing Called Depreciation" thirty pages of discussion on the separate treatment of time- and use-depreciation.

No consideration is given to the methods followed by appraisers. Even their theory of accrued depreciation has apparently been accepted by the author without damage to his theory of accounts.

There are several points of unusual interest in the book which deserve more extended discussions than the author has seen fit to give them. For example, the postulate is made bravely that the increase in costs effected by the additional charge for depreciation on appreciation insures the recovery of funds necessary to restore the assets. This will be a shock to the industrialists of this country who labor under the delusion that cost is not the only price-determining factor with which they have to contend, and who assign a reasonable degree of competence and foresight to boards of directors.

A second example appears on page 28, where the author suggests that if it be insisted that appreciated values be reflected on the books, appreciation should be excluded from surplus, labeled Unearned Appreciation, and "given a special position following the liabilities on the balance sheet. When thus treated it cannot be capitalized." Here is an idea that is truly revolutionary in accounting thought. By changing the position of an item on the balance sheet, the author has discovered that both its nature and potentiality have been completely altered. If the author's words are to be accepted at their face value, current liabilities may be transferred to some net-worth account where they will be available for dividends.

Only as excellent high-handed spoofing can this little book be recommended to the author's fellow-practitioners.

F. E. KOHLER

Federal Income Taxation. Joseph J. Klein. (New York: John Wiley & Sons, Inc. 1929. Pp. xxv, 1749, and indexes. $10.00.)
1931 Cumulative Supplement. (New York: same. Pp. xi, 538. $6.00; both books, $14.00.)

Since the discontinuance of Montgomery's standard work on income taxes, a new book, *Federal Income Taxation,* of monumental proportions and significance, has made its appearance. Dr. Klein is to be congratulated for the high standard of excellence which he has maintained throughout *Federal Income Taxation.* The book deserves first rank as a reference work for practitioners and even as a text-book, though its price and emphasis on cases will tend to discourage its use in courses designed primarily for the expounding of fundamentals. As a stylist and interpreter Klein ranks well above Montgomery; but as a commentator and critic Montgomery must be ceded first place among all those who have thus far ventured into the field of income taxes.

Perhaps the chapters of greatest importance to the beginner in taxation are the first six wherein the general features of the income tax are set forth. These chapters lay an excellent background for subsequent excursions into the details of income, deductions, and administrative matters, and contain the connecting link with the closely related fields of law and accounting. Perhaps Chapter VI, which deals with accounting, was intended merely as a review of the law, regulations, and decisions affecting accounting procedure; but it would seem that an injection of more of the author's opinions as to a number of cited rulings might have added considerable value to this chapter.

Similar comments may be made regarding many subjects presented by the author. The survey is at all times admirable and the worst inconsistencies and blunders which inevitably accompany highly technical laws and their administration he has no hesitancy in condemning. Possibly the present volume, already long, is no place for a recounting of the author's own views on the income-tax scene. Yet the experience of the author and his competence as displayed throughout the book leaves this reviewer looking for future pronouncements from him. What are the trends of the Federal tax law, of court decisions? Is the present income-tax machinery adequate? Is administrative discretion to be preferred over statutory requirements and limitations? What matters concerning public policy have found their way into the income-tax law? Has the incorporation in the law of these matters of public policy been justified in the first instance and in the light of the practical results secured? Should the law reflect good financial and accounting theory? If so, how can the law, in its present form, be improved?

One subject, concerning which little has been said and concerning which much should be said, is valuation, especially "basic" valuation. Chapter VI has something about it, Section C of Part 2 (166 pages) is devoted to it, and references to it appear elsewhere, but at no point does the author pause to state (1) its social significance, which is of primary importance in attempting to understand the ramifications of valuation problems, (2) the evils which the control over valuations might be expected to cure, and (3) the principles, if any, which the present law attempts to lay down through direct and indirect references to valuations. For example, in 1919 a partnership is incorporated, with no change in beneficial interests. On what basis in subsequent years should depreciation be computed? Had the principles of valuation control been formulated in the book, this

question would not remain unanswered, or had cases on the subject arisen, we would have some expression of opinion from the author. Without a careful summarization of principles, and without constant reference to them, the beginner who is attempting to thread his way through the maze of valuation procedures is certain to be bogged.

Yet it is probable that everybody knows *something* about income taxes, enough even to forestall confusion in going through this book from cover to cover. Certain it is that the present subject-matter could be condensed only at the expense of lucidity.

E. L. Kohler

BOOKS RECEIVED

A Community Labor Survey. Bureau of Business Research, College of Commerce and Business Administration. (Urbana: The University of Illinois. 1931. Pp. 58.)

A procedure for organizing and carrying out a labor survey.

Accounting Principles. J. O. McKinsey. (Cincinnati: South-Western Publishing Company. 1931. Pp. 736. $3.60.)

A second printing including extra problems and practice sets in the appendix. These are similar to the ones contained in the text so that two separate sets of practice material are available. This extra material was included at no extra charge.

Accounting Terminology. Preliminary Report of a Special Committee on Terminology. Published under the auspices of The American Institute of Accountants. (New York: The Century Company. 1931. Pp. viii, 126. $1.50.)

A glossary of the more important terms which are peculiar to the profession of accountancy, compiled after ten years of study and investigation.

Corporation Finance. Revised Edition. A. S. Dewing. (New York: The Ronald Press Company. 1931. Pp. xi, 540. $3.50.)

Many things have been included which have assumed importance during the years since the book was first published, and some things which are no longer of prime consideration have either been omitted or have been allotted reduced space. The viewpoint of the book has been brought up to date.

Encyclopedia of Banking and Finance. Glenn G. Munn. (New York: The Bankers Publishing Company. 1931. Pp. viii, 765.)

This reference manual comprising over 3,275 terms relating to Money; Credit; Banking Practice; History; Law; Accounting and Organization; Trusts, Finance; Foreign Exchange; Investments; Securities; Speculation; Business Organization; Insurance; Commodities; Markets; and Brokerage.

Financial Problems of Instalment Selling. Otto C. Lorenz and H. M. Mott-Smith. (New York: McGraw-Hill Book Company. Incorporated. 1931. Pp. xiii, 279. $4.)

Practical methods for the determination of Capital and Discount Requirements, Earned Income, Yield, etc., in Instalment Sales and Finance Practice.

What the Figures Mean. Spencer B. Meredith. (Boston: Financing Publishing Company. 1931. Pp. 77. $1.50.)

The object of this book is to show how to read balance sheets and income statements. It contains significant ratios for 32 different industries.

New York Laws Affecting Business Corporations. Annotated, Revised to May 11, 1931. (New York: United States Corporation Company. 1931. Pp. xxxii, 452. $2.)

This book contains the Business Corporations Law, the General Corporation Law, the Stock Corporation law, the Membership Corporations Law and numerous articles and sections of other chapters of the Consolidated Laws, relating to Business Corporations.

The Fall of Prices. John A. Todd. (London: Oxford University Press. 1931. Pp. B 2, 68.)

A brief account of the facts, the probable causes and possible cures.

UNIVERSITY NOTES

Boston University

Professor Henry J. Bornhofft is resuming teaching after a year's leave of absence.

Professors Percy, Mannix, Sullivan, McCarthy, and Johnson have been teaching at the summer session this year.

University of California at Los Angeles

New members of the department are Professor Constantine Panunzio, who will give courses in Social problems and International Economic problems, and Mr. George Robbins, who comes from the University of Oregon to teach marketing and accounting.

One year of accounting in the sophomore year will be required of all majors in economics. New courses are being added in Industrial Management, Trust Problems, Social Problems, and Business Cycle.

Columbia University

Mr. J. T. McCormick of Syracuse University will be a member of the staff of the accounting laboratory for the summer session of 1932. Mr. McCormick is studying toward a doctor's degree at Columbia and plans to spend a portion of the coming year in residence here. Mr. E. J. Fjeld, of the University of Colorado, who has been doing graduate work at Columbia for the past two years, has been serving as a lecturer in accounting at the College of the City of New York. Mr. Fjeld will be taking his doctor's examination during the coming year.

Mr. Andrew Love has completed work for his master's degree and is continuing toward a doctor's degree this year. He has been a member of the supervisory staff during the past year. Professor Winfield S. Briggs, formerly of the school of business administration of Mississippi State Agricultural and Mechanical College, has been doing graduate work here this year and has recently accepted a professorship at Manhattan College, New York City. Mr. W. D. Rich of Simmons College will be a member of the supervisory staff during this year and will carry graduate work. Mr. A. P. R. Drucker, Dean of the Judson Bemis School of Banking and Business of Colorado College, is planning to complete the residence requirement for his doctor's degree this year and will conduct a class in accounting.

University of Illinois

Leaving the department are C. R. Larimore, assistant, who is to have charge of accounting at Union College, Nebraska, and D. M. Beights, instructor, who will assume charge of accounting at Hamilton College, West Virginia.

New members of the staff will be: C. A. Moyer of Miami University; A. Frank Benedetto, Illinois; J. W. McMahon, Illinois; and C. C. Delong, M.S., Illinois. Mr. Delong was formerly a member of the staff but has been an income tax investigator for the past four years.

Mr. A. C. Littleton has been promoted to the rank of professor of accounting and will retain his position as assistant director of the bureau of business research. Mr. E. L. Theiss has been promoted to associate professor. Associate Professor C. F. Schlatter will be assistant dean of the College of Commerce. Mr. Paul M. Green, assistant in accounting, has passed the preliminary examination for his Ph.D. in Economics. Mr. C. R. Niswonger, assistant, and Mr. F. R. Stout have left the staff to join the staff of a C.P.A. firm.

During the past year enrollment in accounting courses has exceeded by approximately 300 all previous enrollment marks of the department.

Iowa State University

Mr. H. E. Anway of the University of Minnesota will be an instructor in accounting at Iowa this year. Mr. Harry H. Wade, formerly associate in accounting, has been promoted to assistant professor.

Professor Sidney G. Winter this summer offered a short course in accounting in the summer session of the College of Law, Mr. Winter has been re-elected Iowa's representative in the American Society of C.P.A.'s.

University of Minnesota

Mr. J. J. Reighard, associate professor of accounting, has been appointed assistant dean of the School of Business Administration.

Mr. H. J. Ostlund is engaged in research work this summer with the National Wholesale Drug Association. Mr. E. A. Heilman, Mr. O. Nielsen, Mr. I. W. Alm, and Mr. J. O. Burnett of the accounting staff have all been engaged this summer in the industrial survey which is being made as a part of the study of the economic background of employment conditions in the Twin Cities and Duluth. This study is being centered in the Employment Stablization Research Institute which has been established at the University this year by the Rockefeller, Carnegie, and Spelman foundations. The project will probably be carried on over a period of two years and is under the direction of Dean R. A. Stevenson of the School of Business Administration.

University of Montana

A new course in business law, primarily for business administration students, is being offered this year by a graduate of the law school, Mr. James Garlington.

Dean R. C. Line recently suffered a broken leg in a fall from his horse.

New York University

Mr. C. A. Sause has recently prepared practice material for the course in Wall Street Accounting. This material will be published by the New York University press.

Northwestern University

Mr. W. Mason Smith, C.P.A., is returning as assistant professor of accounting after serving three years as assistant secretary of the National Association of Cost Accountants.

At the May, 1931, Illinois C.P.A. examinations twelve of the twenty-two successful candidates received their major training at Northwestern and at the November, 1930, examination eight out of seventeen.

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